Handbook
Skills on Display

Version 31.01.2022

Authored by: Visual Paths Project consortium

Project: VISUAL PATHS-
Visualising Skills and Learning Paths and
supporting acknowledgement of competences
Project: 2019-1-DE02-KA202-006504

VISUAL PATHS

Table of Contents

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Introduction

Vocational education is playing an increasingly important role today as it facilitates and paves the way for careers. Good communication skills, knowledge of mathematics, natural and social sciences, ability to communicate in foreign languages, ability to use information technology are a requirement of today's labor market. In addition, vocational training focuses on business development, environmental and intercultural understanding and self-development to help everyone succeed in their careers. The acquired vocational education provides security for the future, job opportunities in the chosen field and greater opportunities for retraining.

Vocational education programs are updated and live up to the times, so modernization and digitalisation is not an unfamiliar concept.

In the past, textbooks, printed pages were used more in the learning process, now the opportunity to read on a tablet or other smart device is offered; used to draw only with crayons, pencils, gouache or watercolors, could only be cut with scissors, now there are technologies that do the same or something similar and come up with the same or better results. However, the transfer of material to the digital environment is also only one way to improve the educational process.

Processes in pedagogy are changing, including the organization of studies. Technology gives educators new tools, but pedagogy has always been a broader concept, with a deeper purpose than individual tools. There is a complex view in innovation pedagogy, which includes the use of technology not only as a cognitive tool, but also for evaluation, support, and differentiation.

The aim of the project is to create an application that helps the teacher to implement the educational process, facilitate assessment and promote more modern, interesting lessons, follow the growth of each student, provide individualized support.

The application will offer opportunities to perform tests, create evaluation tables, summarize the results of tests, self-evaluation questionnaires. This saves the teacher time in the assessment process and allows them to quickly find an individualized approach to the young person, analyze each completed work and observe the dynamics of the student's development.

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

By getting acquainted with the content of the handbook, the teacher will gain a broad idea about the development of mutual professional competencies between the student and the teacher, their role in the development of the student's future career. Will get acquainted with the possibilities offered by the application developed in the project, both in formal and non-formal education.

Methodological material Skils on Display is developed in the Erasmus + program financing agreement no. 2019-1-DE02-KA202-006504 on the European Union Erasmus + program KA 2 project Visualizing Skills and Learning Paths and supporting recognition of competencies. The methodological material was developed by the vocational education competence center Ogre Technical School.

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

1. Current situation in vocational education

1.1. Formal education

Formal education is a system that includes primary, secondary and higher education degrees, the acquisition of which is confirmed by a state-recognized educational and / or professional qualification document. (Education Law)

Depending on the national education system, a wide range of formal education opportunities is offered at all levels of education.

In primary school, these are programs adapted to the student's state of health and abilities, such as minority education programs, programs for children with various health problems, and so on.

At the secondary level, various thematic orientations are already envisaged, such as humanities, natural sciences, business, etc. Thus, already at the primary school level there are opportunities to obtain an education that corresponds to interests and talents.

Students who want to start their careers as soon as possible choose vocational education, because in parallel with secondary education they also acquire a profession that allows them to start their careers as soon as they have already obtained a professional qualification..

Regardless of the professional qualification obtained, students already acquire professional skills in companies during their studies. Depending on the national system, these may be work-based learning (dual education), shorter and longer internships. A simple practice is distinguished from work-based learning in that within the work-based learning, the student also learns theoretical things in the company, not only practices.

With the development of technology, the demand for different professions is changing, for example, the demand for professions where people are being replaced by robotic machines is decreasing. However, in engineering, at all levels of education, the demand is growing. There is also a growing demand for employees in various professions who, in addition to their professional skills, are well versed in technology, are able to acquire new knowledge and skills that improve the quality of work and allow them to work with the latest technologies and programs.

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

Erasmus+

Such supplementation and improvement of skills is relevant not only when acquiring a profession after primary school, but also while already working.

1.2. Adult education

Adult education is a diverse process of educating individuals that ensures personal development and competitiveness in the labor market throughout a person's life. (Education Law)

Acquiring new skills or improving existing ones, such as the latest technology or software, is becoming very important for adults at different ages and in different professions. Knowledge of foreign languages, various skills that are not directly related to the profession, but important for maintaining a job, such as communication skills, teamwork, critical thinking, etc., are also becoming increasingly important.

Retraining or learning a new profession in order to keep an existing job or find a new one is also becoming relevant. As a result, the various levels and types of adult education opportunities offered by educational institutions are evolving. The offered programs differ both in the duration of the acquisition and the document to be obtained upon completion of the training.

It should also be mentioned that during a lifetime of learning and working independently, a person constantly acquires new knowledge and skills that are useful in performing work duties..

1.3. Lifelong learning

Lifelong learning is learning throughout life that provides opportunities for every member of society to acquire and / or improve knowledge, skills and competences in accordance with the requirements of the labor market, their interests and needs. Lifelong learning covers formal and non-formal education as well as everyday (non-formal) learning. (Implementation plan of the adult education management model for 2016-2020.)

Recognition of non-formal education is also evolving, meaning that an adult has acquired knowledge and skills that correspond to another qualification or a higher qualification during their lifetime. An adult does not have to go through a full training cycle, it is enough to pass an examination at a certified educational institution or center, and the adult obtains a qualification acquired through self-study and / or education.

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Thanks to the support of the European Social Fund, the possibility of learning is also developing, which enables an adult to acquire skills and competences throughout his or her life that he or she could not afford before, because the education is expensive and needs to be adapted to the work schedule.

It is becoming popular to send company employees to acquire the necessary skills, such as communication or teamwork, because the employee or employees will be promoted where these skills will be important. The company can choose an educational program, an educational institution and cover the employee's training, thus providing in-company training.

2. Emerging necessities

2.1. The need to retrain due to technological developments

At present, the demand for highly qualified labor exceeds supply, while many people of working age, due to a lack of knowledge and skills, find it difficult to find a good job or keep their current job.

According to statistics, the shortage of labor will no longer be compensated only by new specialists and graduates of formal education institutions due to demographic and other processes. This is the problem of the country's economic development.

Adult education is not only needed for the low-skilled. The higher the professional qualification, the more effort is needed to maintain and develop it.

Groups of people who do not see the point in learning cause not only economic but also social problems. It is often a difficult target for state aid as well.

According to forecasts from international organizations, in the next five years about half of workers will need retraining, and 90% of jobs will require digital skills.

If we look back ten years ago, the development of high technology and the digital transformation have marked both a faster exchange of information and a demand for new knowledge and skills. It is no longer possible to work in one job until retirement without acquiring additional knowledge. The time of Covid-19 also highlighted this, especially with regard to digital skills, which became extremely necessary in remote working and living conditions.

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Currently, there is a shortage of a certain quality workforce in the labor market - specialists with professional secondary education, exact knowledge, representatives of STEM (Science, Technology, Engineering and Mathematics). There are many young people with only a general education, no professional skills, and it is difficult for them to find a good job. On the other hand, according to statistical data, the shortage of labor force will no longer be compensated only by new specialists and graduates of formal education institutions due to demographic and other processes. To this end, adult learning has a key role to play in shifting the current workforce to lower-paid or declining occupations to areas of growth and labor shortage. Adult education is also becoming a second chance for those who have difficulty finding work or integrating into society due to insufficient qualifications.

2.2. New professions in the 21st century

Skills and resources needed for the future:

- Firstly, no one doubts the wide range of teleworking opportunities that were only partially used in the past. So, everything related to remote work - from home office equipment to various online chat, video conferencing and other solutions, as well as home office support functions – it is and will be in demand in areas where new specialists and knowledge will be needed. For someone else, this trend means a drop in demand or even a disappearance. For example, the so-called The business tourism niche, which affects both the workforce in the air transport and hospitality industries, as well as the workload of various low-skilled office workers.
- Second, there will be an increasing demand for competencies that can meet the wide demand of e-commerce and related sub-sectors. It is not just about online commerce or the online entertainment industry, but also telemedicine, public services and more. And, of course, the related supply, storage industries.
- Third, in the top of the post-Covid professions, labor market researchers rank health care workers, and so on. STEM (Science, Technology, Engineering and Mathematics) professionals.

These three trends make it possible to identify more precisely the areas of knowledge and competencies that employers should invest in to prepare their employees for productive work in

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

Erasmus+

the 21st century. Because, regardless of the company's industry, digital skills are needed by absolutely everyone, as well as knowledge of the application of artificial intelligence and automation in everyday work processes.

Recognizing the need for new knowledge, business and country leaders around the world are committed to investing in educating people. Thus, the European Commission has agreed on a substantial investment in the the Pact for Skills, to provide digital and other skills to people whose professions are disappearing.

Ministry of Economics of the Republic of Latvia forecasts that in 2025 the largest increase in the demand for labor is expected for specialists in physics and engineering, as well as highly qualified specialists in construction, manufacturing and information technology. On the other hand, the largest decline in labor demand is expected for lower-skilled industrial workers, shop assistants, maintenance workers, sales agents and other workers in simple occupations.

The main job opportunity will be created by replacement demand - due to the aging of the workforce and the exit from the labor market, the number of vacancies in the medium term will exceed 150,000. In the long run, job opportunities will increase in the areas that create and service new technologies, and in view of the aging population, demand will increase for various services related to health care, rehabilitation and the silver economy.

It is projected that by 2025, the shortage of highly qualified specialists in natural sciences, information and communication technologies and engineering may increase to about 17,000. In the medium term, there may also be a shortage of labor with secondary vocational education - about 31,000.

2.3. The importance of lifelong learning

At present, the project Improvement of Professional Competence of Employed Persons of the State Education Development Agency of Latvia (SEDA), also known as Learning for Adults, which will be increasingly developed by 2023, makes an ambitious contribution to adult education. The training priorities are based on extensive analytical material on the sectors, qualifications and skills needed for the labor market, with a final list agreed with both the employer and the employee, as well as representatives of the regions and municipalities. It is possible for a working person with minimal self-financing (5% –10%) to acquire really demanded skills and

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

Erasmus+

competencies in the labor market. In addition, tuition is free for people with low-income or needy status, and workers with disabilities are reimbursed for the cost of an assistant or sign language interpreter. It is important that in the conditions of the pandemic, when there was downtime and general ignorance, we were able to mobilize quickly, and the SEDA announced an additional round of training, offering the opportunity to study at a distance. Thus, those who had a break from their main job could use this time for training, including digital skills. Training was in high demand. The project currently offers continuing vocational training programs that provide new qualifications and the opportunity to replace a current job with a better paid job. There are also modules or sets of modules of professional development education programs and vocational education programs, as well as higher education study courses or study modules, which allow to acquire not only the knowledge and skills necessary for the job, but also credit points for continuing studies. The project can also assess skills acquired during work or life.

Adults often cite work-related factors as a major barrier to participation in training, such as difficulties in combining training with work and a lack of employer support. Undoubtedly, there are very good examples where employers have realized that human resources are the key to the success of their business and support employee training, as well as engaging in the development of adult education training courses. But many companies have left education alone to employees. This is not always due to a lack of social responsibility, but also to the structure of our economy, where 57% of the workforce is employed by micro and small enterprises, which often lack the resources to support the training of their employees.

The desire and ability to learn must be developed from an early age, including at school. A good benefit is the shift to a competency approach in the curriculum, where self-directed learning (the ability to learn) is now included as one of the cross-cutting competencies that needs to be nurtured at school. There are definitely groups of people today who do not see the point in learning. This creates not only economic but also social problems. Often these audiences are difficult to reach for state support because they do not even look for information about the training offer. Strategies for reaching these people are different, but it is clear that the most realistic way to do this is through trustees, as close as possible to where they live. These could be, for example, librarians who are approached by citizens for the availability of internet services, customer service centers or social workers. One of the target audiences of the program offered

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

Erasmus+

by SEDA is people with low or insufficient level of education in the labor market, and not only those who have completed primary education, but also those who have general secondary education but do not have other professional skills and knowledge required in the labor market. SEDA has organized and continues to organize information campaigns that people can change their lives by applying for training and gaining a useful profession. Currently in Latvia Ministry's of Economics of the Republic of Latvia public information campaign Be competitive! Dare to learn for a lifetime! takes place. The Ministry of Welfare of the State of Latvia is also doing a lot to reach those who are unemployed and to offer training that focuses not only on acquiring professional skills but also on socialization skills so that people can better integrate into society.

3. The need for change

3.1. The digital age

Nowadays, information technology accompanies us every step of the way, no household is imaginable without multiple computers and internet connection. According to Eurostat, the number of households in Europe with internet access has risen from 86% to 92% in the last five years, and in some countries, such as Latvia or Poland, it has risen by as much as 10-12%. In addition, 90% of all Internet users have direct access to broadband. This means that there are ample opportunities to learn remotely, both by attending online classes and watching videos, performing various tasks online, and so on. etc.

Almost everyone has a smartphone that now performs not only the usual functions of a phone, but also a personal planner, notebook, information store, e-mail manager, etc. c. According to Eurostat, on average 73% of the population in Europe use the Internet on mobile devices, compared to 83% in some partner countries.

The general situation in the world has also facilitated the entry of information technology into people's daily lives, and has encouraged us to now choose to do the things we used to do in person at a distance. This applies to both employment and private life.

3.2. Available tools

There are many different tools and platforms available today that we use to track our growth and / or learning at any level of education. Of course, a lot depends on the education system of the

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

country as a whole, as well as on the educational institution, its possibilities, the environment used, as well as the traditions.

Practically all educational institutions use some form of electronic journal, where students and their parents have access to information about the timetable, assignments, grades, absences and other information. For the most part, it is a basic platform for communication with an educational institution. However, this type of e-journal does not provide an opportunity to keep track of its growth, it does not show the set that has already been done, which still needs to be done to obtain, for example, a professional qualification.

Also, most educational institutions use a learning platform (e-environment) where students can obtain materials from teachers, submit their assignments, see planned courses, and accumulate progress through individual courses.

There is a possibility that both the electronic journal and the learning platform are one system that allows you to do all of the above in one environment.

But all these systems have one thing in common, they focus on formal education. All study content is planned for a group of pupils / students. The planned courses / subjects provided by the curriculum are attached to the group. Teachers who will teach these courses are attracted to the courses, so whoever has virtually no opportunity to adapt the learning environment to their needs or pace.

3.3. The need for an appropriate tool

When evaluating all available digital solutions, a learner who wants to follow their growth, their development, which would include both formal and non-formal education, does not have a single platform that would allow them to do so.

There are many platforms and tools that are used during formal education. It is much more complicated with non-formal education, especially if a person learns outside the formal system, without a group.

Very often, various digital tools allow you to keep track of what you have learned (for example, electronic journals), but do not offer the opportunity to save, accumulate your achievements, completed works, passed exams, tests, diplomas or certificates, practical experience certificates,

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

Erasmus+

etc. etc. In principle, in addition to studies, there is no opportunity to create one's own portfolio of achievements, where evidence of various achievements and completed work is accumulated in one place.

Such a portfolio would be very useful when looking for a job or an existing job in terms of promotion or salary supplement.

Now that the epidemiological situation in the world has forced the whole society to become more digital, to learn to replace face-to-face communication with remote ones, it is important for people to be comfortable, easy and understandable to follow their development, creating a portfolio of achievements quickly accessible.

It would also be important to communicate with the teacher on the same platform, where you can see your past achievements, the necessary steps to get an education, as well as build your portfolio there.

3.4. Tool customization options

Given the world situation, where the use of technology and techniques is an integral part of our daily lives, the ideal system should be usable in a variety of devices, such as a computer, smartphone, tablet, and so on. However, all information must be stored in the system itself to ensure data synchronization. Of course, it should also be possible to download and upload data, for example, the learner could upload the results of the work done, while the portfolio could be downloaded, and the teacher could upload the terms of the assignment..

From the learner's point of view, in order for the system to keep track of its growth and also see the steps to be taken towards the goal, it should have the following capabilities:

- The names of the subjects or modules to be studied and the results to be achieved;
- Specific tasks with requirements and evaluation options;
- Diary entries;
- Accumulation portfolio;
- Opportunity to contact a teacher or mentor / practice manager;
- Non-formal learning achievements.

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

It would be good if the learner could add specific steps or achievable results that he / she has set for his / her own growth or for a non-formal education program that he / she wants to learn.

From the point of view of the teacher or practice leader, in order for the system to follow the learner's growth and see the steps to be taken towards the goal, it should have the following options:

- The names of the subjects or modules to be studied and the results to be achieved;
- Specific tasks to be performed with conditions and evaluation possibilities;
- Ability to post grades/ratings;
- Diary entries;
- Opportunity to contact student;
- Non-formal learning achievements.

Internships in companies are often disconnected from the learning process at school because the internship manager in the company is not aware of what the learner has learned or will continue to learn. If this possibility were provided in this system, the beneficiaries would be both the learner, the school and the company.

But the most important thing is the opportunity for the learner to review what has already been achieved, to see future steps, tasks to be performed in order to reach the set goal.

4. Current situation in partner countries

4.1. Situation in Latvia

At this exact moment, Latvia has three stable systems that are used in the field of education:

- e-klase.lv;
- mykoob.lv;
- various e-environments of educational institutions based on moodle.

The first two are e-learning journals that include the following features:

- Diary;
- Communication with teachers;
- Assignment of tasks;

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

Erasmus+

- Posting grades/ratings;
- Marking of absences;
- e-klase has video communication options.

Each educational institution or organization that offers different types of education has created its own e-environment based on the moodle system. Usually such systems offer:

- To see the tasks that need to be done, grouped by subjects, modules or courses;
- To receive and submit tasks;
- To receive formative or summative assessment from the teacher;
- To contact the teacher;
- Possibilty for students to keep track of their tasks.

None of these systems offer communication with the placement and / or supervisor, so it is not possible to keep track of your professional development outside school. Therefore, in 2021, a new electronic system edy365.lv was created in Latvia, which allows creating an internship diary electronically. In this system, the trainee, the place of practice / supervisor and the supervisor / teacher from the school are interconnected. This is a very convenient system that allows companies to offer internships, students to choose internships, and the school to follow the student's progress. However, the system is only in the process of approbation. And this system is also disconnected from the school, the company does not see such information from the skills that the student has acquired or will acquire at school..

As can be seen, although the country has ample opportunities to record and supervise the educational process in the electronic environment, none of these systems provides for the supervision or accounting of non-formal education from the learner's point of view..

It should also be noted that not all of these systems have a full-fledged version of the mobile application, however, the systems are also good for use on a smartphone..

4.2. Situation in Germany

In September 2020 The BIBB (Bundesinstituts für Berufsbildung) published a recommendation for the writing of learning evidences in VET education:

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

Erasmus+

In Germany learners in VET-education are writing their Learning Diaries (Ausbildungsnachweis) on a weekly or daily basis with the following intentions: Learners should reflect on the content and the progress of the education. Educators should be informed about the current state and progress of the education and evidence in a simple form should be given for external monitoring (e.g. chambers of commerce /IHK).

As minimum requirements for the learning diaries (Ausbildungsnachweise) diaries must be filled in by the learners themselves and can be in written or electronic form. They must contain the name, the education year and the reported period of time. They learning diaries need to contain education activities in the education company (including their time lenght) and the topics in the VET-school. Learning diaries should need to be checked by the educators at least on a monthly basis.Communication is seen as a central factor for the success the education. Digital communication is seen to reflect more and more the working habits of the learners.

But still most learning diaries are written in paper, but also a growing number of electronic tools or online-services are available. General tools -open for all kinds of jobs- are available or tools related to certain fields of jobs (e.g. bakers, gardeners)

Digitales Berichtsheft IHK

https://ausbildung-weiterdenken.ihk.de

Blok- Das Online Berichtsheft

https://www.online-ausbildungsnachweis.de

These tools are focussed on the required evidence for the education (Ausbildungsnachweis) and do not comprise other forms of learning such as informal learning or personal learning.

4.3. Situation in Finland

Finland has utilized student management software for the most part of the 21st century. For example, the most common software, Wilma, was established in 2000. These types of software such as Wilma and StarSoft's Primus have been specifically built to match the requirements of

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

Erasmus+

the Finnish system and educational laws. The most common way to utilize this software is to upkeep communication between schools and parents. In addition to Wilma and Primus, there is a newcomer to the market, Helmi, but its market share is still quite small compared to its more disseminated competitors. The market for student management software in Finland is saturated, meaning that tools such as SchoolTool, a free student information system developed by The Shuttleworth Foundation, have little chance of success when their features do not meet the specialized requirements of Finnish schools.

Besides student management platforms there has been a distinct increase in the introduction and application of collaborative web-based learning platforms during the Covid-19 pandemic. This is most likely due to the decrease in face-to-face teaching as many schools shifted into remote learning. Finnish schools, however, engage with web-based learning tools in everyday classroom teaching as well. This is a part of the aspiration to make students digital natives from an early age. This is apparent also by including coding and programming into the Finnish school curriculum.

Web-based learning platforms used in Finland include Flinga, a collaborative whiteboard. Flinga is a Finnish application that expands the interaction between the student and the teacher in the classroom. Flinga allows the students to share learning outcomes through content creation directly via a web browser. Flinga can be accessed free of charge and the application is also accessible; meaning it is easily used. Flinga takes the idea of communal learning and co-creation to the web, allowing students to focus on any given tasks in a way that activates the students' participation. In addition to being a versatile eLearning-tool, Flinga has also been reported as fun to use by students.

Some Finnish educational institutions also utilize Jamboard, the Google-developed whiteboard-application that functions with Google Workspace. Helsinki University has developed Presemo, a student activation tool used in face-to-face and remote learning, for its students. Via Presemo students can answer questions, vote and engage in conversations.

In general Finnish schools are adept at adapting online learning techniques and tools in a handily fashion as the need arises. Tools such as Padlet, a collaborative web-platform for uploading, organizing and sharing content, and Kahoot, a game-based learning platform, are readily taken

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

Erasmus+

advantage of in Finnish schools. Indeed, gamification is a growing trend, utilized in primary, secondary and higher education. For example, Helsinki University Digital Leap funding and Faculty of Arts Development Fund contributed to the development of an open access game The Durga Puja Mystery, targeted towards university students studying South Asian studies to learn more about contemporary Indian culture and society.

Web-based communication platforms such as Microsoft Teams, Zoom, Google Meet and YouTube are also used for online learning. Moreover, there has been a boost in the usage of podcasts as learning tools in Finnish secondary education (vocational schools and high schools). Moodle remains popular in higher education; in universities and universities of applied sciences.

In conclusion, Finnish teachers, students and parents are well-versed with web-based student management software as well as eLearning tools, and these are utilized in everyday communication, remote teaching as well as face-to-face learning. Whether or not the engagement with these tools has contributed to the high-quality of the Finnish education system, recognized in international rankings, remains to be concisely determined.

4.4. Situation in Austria

Digital media are changing our world and our lives. Modern educational and work processes are hardly conceivable without the use of digital technologies - digital and IT skills are essential for participation in our society. The eEducation Austria initiative of the Federal Ministry of Education, Science and Research aims to bring digital and IT skills to all classrooms in Austria - from elementary school to the matriculation and diploma examination.
Pupils grow up with digital media and mostly use them freely and in a variety of ways. The eEducation Austria initiative of the Federal Ministry of Education promotes the acquisition of the necessary skills to use technologies consciously and productively for one's own further development or to gain a foothold in corresponding future-oriented professional fields.

The focus of all activities is the didactically meaningful use of digital media in all subjects as well as increasing the digital and computer skills of schoolchildren. It is about application scenarios that generate benefits for learning and teaching or prepare the students to use digital technologies competently in the workplace.

Digital infrastructure, learning platforms and alternative software

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

There is an extensive range of software and tools for educational institutions to digitally enrich the lessons. The examples given are representative of the multitude of possibilities in the Austrian school system:

- Lernen mit System (Systematic learning)

  LMS.at has been anchored as a learning platform in everyday Austrian school life for many years and is an integral part of everyday school life for thousands of students and teachers.

- eduvidual

  On behalf of the Federal Ministry of Education, Science and Research, the service and development center for learning management Moodle was set up at the University of Education in Upper Austria with a nationwide mandate.

- G Suite for Education

  G Suite for Education is an integrated communication and collaboration solution for educational institutions that includes hosted services like Google Drive, Google Docs, Google Sheets, Google Slides, and Google Classroom.

- Microsoft Office 365 for Education

  Office 365 Education is a collection of services for collaborative editing and task sharing. The software is free for college faculty and students. The service includes Office Online (Word, PowerPoint, Excel and OneNote), 1TB OneDrive storage, Yammer and SharePoint sites.

- Lerningplattform Moodle

  Moodle is a free course management system and learning platform. The software offers the possibility to support cooperative teaching and learning methods.

Used digital Media in Die Kärntner Volkshochschule

The VHS has been working with the Moodle program in its courses since 2019. Since 2020, Moodle and online learning has become an important part of the classroom. Due to the pandemic, the courses had to be completely switched to online. Moodle is used for assignments

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

and online tests. The app can also be used via computer and smartphone. Therefore it is suitable for the target group.

Moodle lacks the exchange between tutor and student, which is why feedback is neglected. There is the possibility to evaluate students, but the platform is not designed for a lively exchange. The learning progress during the semester is also not visible in the platform.

4.5. Situation in Poland

The Polish Educational System has been subject to a systematic process of computerisation for many years, thus following the general trend of building a modern information society. The introduced information technologies streamline the process of school administration and management, support the didactic process and more and more often become a tool of communication between school and parents.

In response to the systematic introduction of ICT to schools, and especially to the increasingly popular e-journals, the Minister of National Education allowed schools to keep documentation of school activities only in electronic form. The most important advantage of the e-journal is that it allows parents to see the student's grades and to monitor their attendance at school. The e-journal also greatly facilitates contact between the teacher and parents. An example of such a diary is Librus Synergia, which in over 8000 Polish schools has replaced the traditional forms of documenting student performance and checking their attendance. Apart from its recording function, it is also a universal school diary and a tool supporting the headmaster in administrative tasks. Nowadays, students in primary, secondary and technical schools as well as their parents cannot imagine the reality without the possibility of instant access to all grades, attendance and scheduled tests. The most important functions of this electronic journal are: viewing grades with details such as date of issue and type of activity, checking attendance, scheduling tests, tests and class work, a module for tracking homework, ongoing communication between teachers and parents and students, access to announcements and information on substitutions.

Currently, distance learning is one of the most dynamically developing fields related to education. One of the forms of distance learning is e-learning, in which we can distinguish education with the use of websites, so-called educational platforms. The most commonly used include:

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Microsoft Office 365 for Education, Google for Education, Genially, Scholaris, Moodle platform, e-podręczniki and others.

Microsoft Office 365 for Education is by far the most powerful tool for collaboration between students and teachers. It is a free version of Office 365, which allows the whole school to use the online version of a number of tools such as Teams application, which allows group communication, file sharing, assessment of student work or sharing the teacher's screen with all students.

Google for Education offers teachers the opportunity to better prepare all students, helping them develop the skills they need to succeed in new and engaging ways. Google Classroom is an intuitive tool with which we can conduct lessons, including in the form of teleconferences. The application also allows for the creation of virtual classes, assigning and grading homework by teachers.

The Genially platform creates interactive quizzes, games or infographics for students of almost any age. Additionally, Genially enables integration of the platform with Office 365 for education.

Scholaris is a knowledge portal for teachers containing free educational resources which are adapted to all stages of education. The portal contains approximately 28 thousand individual interactive materials, helpful in the implementation of content from all subjects, at various educational levels. These include lesson scenarios, exercises, texts, animations, slides, simulations, teaching games and films.

The Moodle platform enables the creation and administration of online courses - thus managing the entire process of remote teaching. It is a development project aimed at supporting its didactic and methodical aspect in education.

The epodreczniki.pl platform is a whole learning and teaching environment. It offers the possibility to work in groups and adapts to the individual student's learning style. Each user can collect their own materials, share them and create their own original versions. In addition, the platform gives the possibility to create interdisciplinary lessons, teacher's original versions of textbooks, group work, individual learning. The main idea behind the creation of the epodręczniki.pl platform is to provide didactic support for teachers in the implementation of the school curriculum.

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

Erasmus+

Many teachers are sceptical about the use of the Internet and computer technology in teaching, as none of the technologies used offers the possibility to follow a student's professional development outside school. However, one should be aware that students already belong to the group of digital users - the generation born in the era of the Internet, computers and mobile devices.

5. The tool

5.1. User guide from a school / teacher perspective

The school or teacher would need the opportunity to add the whole curriculum, by subjects, modules, their results. It should also be possible to add specific tasks and post a grade. Out-of-school placements, if provided, should also be included in the system. Schematically the required functionality can be seen in Figure 1 System functionality from the teacher's perspective.

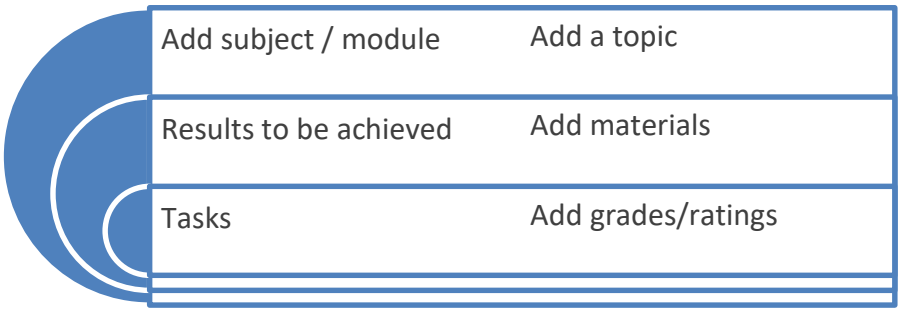

Illustration 1 System functionality from a teacher's perspective

Such attachment options should be for the whole group or class, as well as an individual plan for a particular learner.

Communication with learners is also required, if necessary, the possibility to make an online or video call.

When using the platform, the teacher has a wide range of options at his/her disposal - from the ability to add the whole curriculum, divided into subjects, modules and their results, to creating and assigning different types of tasks to particular students, to its assessment. Each assignment submitted for assessment must be supported by evidence of completion, such as an attached photo or text file.

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Teachers can create all types of learning cards, but only a task and assessment cards can be assigned to students. Each of them is a separate task, the solution of which gives evidence of acquired knowledge or skills, or a report or test proving them. The teacher has the option to create cards, which are intended for building the educational profile by the students themselves, i.e. Diary Cards, Achievement Cards and Portfolio Cards, for his/her own use, but they will not be visible to the students in any way.

Types of learning cards on the teacher's profile:

1. Task cards - can be created by both teachers and students. Teachers have the ability to assign the task cards they create to a group of students or individual students, set a due date for the task, and grade the submitted task. The teacher can also see the task cards created by students on their profiles as long as their status has been set to visible.
2. Assessment cards - are learning cards that only teachers can create. To make the created evaluation questionnaire available for students to fill out, the teacher must save it as a template.
3. Diary, achievement and portfolio cards - are cards created largely by the students themselves. The teacher can create them but does not have the ability to assign them.

Students create these learning cards as documentation of tasks completed, knowledge gained, and accomplishments earned, starting with the less significant and everyday ones in the diary cards, to the more significant ones in the achievement cards, to the ones worth sharing with stakeholders - the portfolio cards.

The teacher's assignments can be for the whole group or class as well as for an individual student. This tool allows the teacher to have an ongoing view of the progress and performance of a particular student and the whole group under their care. Communication between students and teachers or between students themselves is possible via the platform's text messaging feature.

The functionality of the system from a teacher's perspective can be seen in Figure 1 Functionality of the system from a teacher's perspective.

On the Visual paths platform, an educator will be able to create a course that is divided into teaching subjects, teaching modules, add a score, a lesson topic, and communicate with students.

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

You'll need to select Create Course to add a course.

Then you'll have to follow the steps you've requested.

1. Add a course and curriculum

1.1.1 The course name must be entered.

1.1.2 Course language (Latvian, English, German, Finnish, Polish).

1.1.3 The introduction where the subject of the course will be described.

1.1.4 attainable outcome of the training.

1.1.5 You must enter the duration of the lessons for how many minutes will take/a lesson.

1.1.6 How complicated the course will be, you can choose (Basic, medium, additional, brilliant).

1.1.7 If the course needs to be able to add a person to

1.1.8 In addition, insert the material where the course topic was created.

1.1.9 In the course, you can also add another document or picture that you want to display.

1.1.10 You can choose whether you want to publish the course now or publish later when you need it.

1.2.1 When a course is created when you open a course, you have the option to add the subject.

1.2.2 When a teaching premet can be added to a task, you can create a task for each pupil individually or for a group of students at the same time.

1.2.3 When you create a task, you can add a task run time that requires the task to be executed and assigned.

2 Edit a category

2.1.1 Add category name

2.1.2 Add Category Description

2.1.3 Mark the category language (Latvian, English, German, Finnish, Polish).

2.1.4 You can add a picture to the category from both your computer and your internal application bank, where you are stored in the application cloud.

2.1.5 You can choose whether Category will be active immediately or inactive until you activate it.

2.1.6 You can edit the category at any time you want.

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

3 Add meanings.

3.1.1. Once a student has performed the job, you have the opportunity to add a meaning, an achievement card.

4 User Statistics

4.1.1 You can see user statistics when the user is registered from which city.

5 Communication

5.0.1. You can contact a specific person using the same online learning environment.

5.0.2. Under the section message, you can see the messages you have read, unread, and sent.

6 Create a message.

6.1.1 To create a message, you must select the person you want to contact.

6.1.2 You must enter the subject you want to contact.

6.1.3 You must enter the message, the information you want to send to the person concerned.

Conclusions

These days, more and more thinking or talking about the education of a learner, it is not only formal education, it is lifelong learning, which includes both formal education programmes that grant qualifications and those that offer to supplement their knowledge with new or modern skills, to obtain their endorsements in different forms and ways. But lifelong learning also means that there are things that a student can learn without a specific programme or learning anything, besides developing non-formal skills, such as communication, teamwork, digital skills, entrepreneurship and others.

It must also be taken into account the requirements of the era, which indicate the emergence of new professions, be overlooked. Or the performance of job duties changes the form, means and technology to be used in the performance of job duties. And in order to learn all this, there is a continued need to develop, acquire the latest in the sector, everything related to digital skills, remote work and learning.

Although there are plenty of different platforms in the field of education, this is reflected in the possibilities of partner countries under Chapter Four, virtually all are linked to an educational establishment and/or a formal programme. There is no platform or application that allows you

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

to create the results that can be achieved entirely from zero, or to add an existing program with the results that you want to achieve.

And the platform developed in this project, the application provides such opportunities. An educatee can create tasks himself or herself, create categories, then save it to a specific category and specific type. There is an opportunity to do this all along with formal education, or completely independent. When you register and learn, you can save your achievements and jobs both as journal entries, as portfolio entries, and in both categories at once.

It will be more practicable, although based on formal education, which already provides for the results of non-formal education, it is also possible to create tasks for itself. You can also create interest groups with friends to learn informal skills together.

The platform developed under the Visual Path project will benefit both the educatee and the educational establishment and teachers.

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

List of used literature and sources

1. Collective of authors (2018). A practical guide to working with adults in vocational education institutions, VISC, pp. 8-27.
2. https://biznesam.swedbank.lv/ievads/izaugsme/kadel-izdevigak-parkvalificet-53187
3. https://lvportals.lv/viedokli/332540-izglitiba-muza-garuma-ir-musdienu-dzives-nepieciesamiba-2021
4. https://lvportals.lv/viedokli/332540-izglitiba-muza-garuma-ir-musdienu-dzives-nepieciesamiba-2021
5. https://www.e-klase.lv/aktualitates/zinas/ekonomikas-ministrija-izglitibas-sistemai-jarada-darba-tirgum-nepieciesamais-darbaspeks?id=15718
6. Empfehlung des Hauptausschusses des Bundesinstituts für Berufsbildung (BIBB) vom 1. September 2020 für das Führen von Ausbildungsnachweisen

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

Annexes

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

Annex 1 / Use cases in Latvia

1. Such an app would also be very useful in work with adults. The tool could be used by professional in-service training groups that master shorter educational programmes, as well as by learners of the professional further educational programmes who master a vocational qualification. In both cases, it could be a very valuable and useful tool that would allow learners to follow their learning process and achieved results.

In the professional in-service training programme, the tool could contain specific outcomes to be achieved and they could be supplemented by assigned tasks and study materials. The results of the completed tasks could also be included there.

In the professional further educational programmes, the tool must contain all the learnable modules that are planned for acquiring the professional qualification. Within the module, there could be more detailed expected results or/and assigned tasks. It would also be fine if an adult could add his/her own expected results and achievements of necessity and development of soft skills. In this case, professional tasks go alongside with possibility to evaluate other skills that are developed during implementation of specific tasks.

2. The app could also be very useful in practical training, including work-based learning (dual learning). The app would give a possibility to review amount of learning and internship at the company, their distribution, length, deadlines and the results to be achieved. If the results of the tasks completed during internship were compiled in the tool, it would facilitate preparation and submission of an internship report. To implement work-based learning, the app could reflect the results to be achieved every day/week. In this case, both the internship supervisors from the educational establishment and the company shall be given access to the tool.

Co-funded by the Erasmus+ Programme of the European Union

2019-1-DE02-KA202-006504

Erasmus+