

Modernization of education - new approaches for Vocational Education (VET) and ways for closing the gap between school education and labour market expectations

Modernisation of education demands new methods from schools from management level to teachers. A new pedagogical culture is a need. This approach should adapt as well as with the changes of the labour market, and with the students' needs. It should also be flexible and use the newest techniques in communication and information. The digital technology plays a great role in reforming education in the 21st century. Up to date methods and new education organising systems offer opportunities when it comes to examining teaching-learning process. School see that in our modern and fast changing world handling these situations could be considered as a key factor for being socially successful.

Learning process has a special role in adapting to new environment

Learning is often seen as an ability to access, convey and renew information (Lucas, 2014). Evidence show that these changes affect schools as well. One of the proofs that economic and social changes have an impact on education is the appearance of communication technology and digital tools. Laptops, projectors, mobiles, cameras, and interactive whiteboards for instance, play a great role in this. These factors lead to the renewal of teaching-learning techniques and methods.

In the last two decades competence and individual learning were the key words put into focus. Individualisation is the aspiration to make learning process successful for each and every learner. Customisation will change mass-teaching; personal needs of learners are becoming more and more important besides competence-based teaching. Therefore, it is of great importance to make teachers able to support the different ways of learning.

One of the methods used to help this process is the project-based learning and flipped classroom method, which aims at developing professional, personal and social skills that are necessary for young people to act in a world we do not foresee clearly. Pupils need skills and knowledge that will help them to integrate theory into practice, in other words, to create constructed knowledge.

The tendencies mentioned above mean new challenges to teachers. Present and future educators need to respond to challenges and are asked to face new expectations they never met before. Now they have to apply learner-centred teaching methods instead of teacher-centred models.

Also, the expectation to schools, teachers and learners has changed a lot in the 21st century, the importance of learner centred method has never been greater. Among all the varied methods used for knowledge acquisition and transfer, this new point of view is unique in putting emphasis on learner's activity.

Experts labelled the millennium as the turning point and claimed education to be a key factor in the process while pointing out the significance of change. Technology has the potential to transform many methods and practices in education, as well as the learning process itself. Probably the biggest change has been in the access to data and information which has become available - fast and flexible for nearly everyone. Educators need to be able to utilize the advantages that this technology can bring to their particular areas of education. The same technology changes are creating new professions and occupations. These professions are demanding new skills of today's workforce, and hence of today's students. Education needs to be able to judge which professions will be in demand in the near future, and what skills and abilities will be required of current students. It is essential that they develop to match these needs, so that they will be suitably prepared for tomorrow's life and that their employment chances will be increased.

How and on what should educators be re-skilled to prepare their students for the 21st century?

The rapidly changing economic and social environment require a correspondingly constant adaptation from the actors of the economy. This includes vocational education to prepare many of the workforce for the changing labour market.

For this very reason vocational education has been pushed into the spotlight in European countries over the past few years, and a reformation and transformation of the development of vocational education is subsequently in progress (European Commission, 2012). The aims are focused on reducing the distance between what education provides and what work requires, for example by enhancing practical education and placing less emphasis on theory-based teaching methods (BCS, 2019)

Today, employers require workers-to-be that have the key competences that are necessary for employment, meaning that workers should have a wide range of practical skills and experience, as well as theoretical knowledge of the topic they are working on. Economic changes are happening very quickly, so students must be self-prepared for being able to adjust to new areas, roles and even to change for new jobs at any time. This is why life-long/life-wide learning is essential for tomorrow's workforce (OECD, 2019)

Within such a rapidly changing environment, whether students will eventually become employees or entrepreneurs, they will need to be able to quickly acquire and apply new information. Further, they must exhibit those 21st-century skills that will enable them to perform effectively in the labour market and to be able to react to rapid economic and technological changes. These skills include problem solving, critical thinking, communication, teamwork, the use of technology, and innovation.

To develop these skills, traditional teaching methods are no longer wholly appropriate, which is why it is necessary to introduce innovation in areas such as Active Learning Methods into vocational education.

Traditional teaching methods tend, not unnaturally, to be centred around the teacher, who transmits knowledge and information to the students in what is generally a one-way communication process.

Learners listen, take notes, and often participate all too passively in the classes. Modern active learning methods have been designed to change this so that students participate much more actively in the overall learning process.

Numerous attempts are made to introduce these new methods in many countries and schools.

However, their introduction and application can be a difficult task for schools, for teachers and even for students, not least because they generally sit alongside more traditional methods.

Active learning

Active learning applies to activities done by students, who also should always reflect on what they are doing. They do not simply receive knowledge passively but actively participate in the learning process. Of course, the transfer of knowledge remains important, but the development of abilities and skills gains a greater significance. Active learning is learner-centred, shifting the emphasis from the teacher and the transfer of the learning materials to the active work of the students with the learning material.

One of the goals of active learning is to ensure that students developing their abilities and skills for lifelong learning. Active learning methods include the methods of problem-, project- and research-based learning as well as the flipped classroom method.

In the frontal, classical style of teaching, the teacher transmits knowledge to their students, who receive and learn all that knowledge. At the end of the learning process, the teachers measure—by means of a test—to what extent learners have succeeded in acquiring the learning material, i.e. whether they succeeded in achieving the objectives. The teacher's role is active, while that of the students is much more passive - absorbing information.

“The introduction of active learning methods into the school classrooms has brought about an unambiguous change in the teacher role too. The teacher’s earlier distinguished position—in front of the class, or standing in the middle of the class—has also ceased, the educator has rather become a kind of “mobile counsellor,” who is learning along with their students and meanwhile labouring to allow greater and greater space to them. For the sake of facilitating active learning, the teacher must become a tutor.” (Niemi, 2017)

This new teacher role places teachers in the midst of the learners, though their authority and function are not diminished as a result. It is still very much the teachers who organise and support the learning process. Their role is complex: they stimulate interest, prompt with thought-provoking questions, observe and foster the work of the groups, give help and information, control, offer feedback, guide practice, and evaluate.

The foundation of the learning process is the cooperation between students and teachers.

There have been many initiatives created for the purpose of comprehensively formulating and collecting 21st century competences. Some things are common to every approach - the need for digital competence; the ability to communicate effectively, and for students to take the initiative and responsibility for their learning. The World Economic Forum has undertaken a multi-year initiative—the New Vision for Education—to examine the pressing issues of the widening skills gaps, and to explore ways of addressing and closing these gaps through judicious use of technology.

The top 21st century skills for students entering into the job market in the future are communication in mother tongue and minimum in one foreign language; mathematical and basic competences in science and technology; digital competence; learning to learn; social and civic competences; sense of initiative and entrepreneurship and cultural awareness and expression (DigComp, 2013). By teaching the students these skills and knowledge we can assure, that upcoming generation will be more ready for entering the labour market that they are now. Employers’ expectations especially towards vocational education graduates are high, but it would also need more input from entrepreneurs to participate in educational process, developing school curriculums and providing students and teachers with internship possibilities. Teachers’ role is to guide students and drive their motivation towards learning.

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