

Lifelong Learning: Future learning – Future skills

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Introduction

Defining what learning is, is a complex issue as learning is an ordinary and also a scientific phenomenon. According to the ordinary sense, we presume that learning is equal to school and it means the acquisition or learning the teaching-learning material, processing some information. Learning can be successful if we spend a lot of time with practising and we read or listen to the material as many times as possible. The more time we spend with practice and revision, the more effective this procedure could be. We cannot ignore that the ordinary concept of learning has another layer of meaning. We also consider the formation and development of skills and abilities as learning.

The scientific approach to learning looks for answers to questions such as what learning is based on, how the learning process takes place, what are the basic external and internal factors of learning and what changes learning can cause (Nahalka 2003).

Learning is the key to advancement and development and in our accelerated world, we are part of continuous changes. We meet new phenomena like knowledge-based society, key competences, lifelong and life wide learning, e-learning, blended courses. The way for us to adapt to different changes and challenges is to have up-to-date, usable knowledge. It is important to understand that lexical, theoretical knowledge is still essential, but the role of abilities, skills, attitudes and competences is constantly increasing. When the emphasis is placed on the individual needs of the students, on developing their personal learning paths and taking responsibility for their own learning, we have to strengthen teamwork, problem solving and cooperation (Virág 2013).

The European Commission and OECD have been working out different, general strategies, documents, guides and devices to orientate the renewal work in educational systems. On the one hand all these materials are very useful and inspiring as they introduce international tendencies, trends, expectations, research data and results of international researches. On the other hand, national educational systems have been built on national values, political, cultural, social traditions and rules. It takes time to find the points where international and national ideas, intentions can meet in effective and applicable ways and reforms or innovations can be implemented in pedagogical practice. It is obvious that in the 21st century which can be characterized by globalization, artificial intelligence and digitalisation, it is our duty to examine what future skills, abilities, values, and attitudes can contribute to the well-being of the rising generations.

1. The concept of learning

The concept of learning can be examined from different perspectives.

1.1. Learning in ordinary sense

Archaeological research suggests that tool-making progenitors lived on Earth approximately three million years ago. We can also find some early steps of education, the transfer of experience, and conscious teaching in this era but there were not any kinds of organized, institutional educations. Children acquired mainly practical knowledge by observing and imitating the work and actions of their parents (Pukánszky–Németh 1996).

“Everyone is familiar with learning somehow and everyone knows something about it. Parents know that once upon a time this was their task at school, and now their child also performs this task” (Nahalka 2006: 9).

This means that learning is an integral part of a person's everyday life. However, for most people learning is equal to school and we suppose that it is a finite and closable procedure. According to Lappints (2002), learning is one of the most common and most complex human activities. We can say that it is general, since we learn continuously and everywhere, even if we do not do it consciously. It is also a very complicated activity, since our entire personality takes part in it and through learning our entire personality develops and enriches itself. It is also important to emphasize that people are social beings. Learning takes place in a given, defined social environment, through interactions with our environment (Lappints 2002). We can acquire and learn theoretical and practical knowledge accumulated over millennia. This knowledge includes the facts, ideas formulated by sciences, the practical knowledge that is necessary for our everyday life, and our technical-technological knowledge as well (Halász–Annási 2011).

We presume that learning results in positive changes in our behaviour, attitudes, mindset, emotions so in our whole personality.

1.2. Learning from the perspective of Psychology

Psychological trends and theories define the concept of learning in different ways, but each concept highlights the importance of adaptability and memory. Adaptability is created by external influences, experiences, acquisition of new or restructuring of our previous knowledge. At this point it is also important to attend to how much and what kind of previous information, facts or data we have. In addition, a lot of theories highlight “Ivan Pavlov’s experiments that were related to classical conditioning and according to him, learning is a long series of conditioned reflexes” (Virág 2013: 16).

According to Atkinson “Learning is a relatively permanent change in behaviour resulting from experience” (Atkinson 2005: 260).

Gaskó highlights that Atkinson distinguished 5 psychological trends and points of view in relation to learning. These are biological, behaviourist, cognitive, psychoanalytic and phenomenological. According to the biological trend, learning can be interpreted as a change in our nervous system. Behaviourists believe that learning is a response to stimuli from the environment. Cognitive psychologists focus on our mental processes. The psychoanalytic trend examines the role of learning in personality development. Representatives of the phenomenological trend deal with learning motivations and self-realization (Gaskó 2006).

Nahalka writes that “Learning is a permanent and adaptive change that occurs as a result of the interaction with the environment in a system or its controlling subsystem” (Nahalka 2003: 79). Examining this definition, we can conclude that the system means the person, and the controlling subsystem is the given person's nervous system. By environment, we can understand the natural, built, and social environment, and the interaction is manifested in human actions. Durability contributes to the fact that we can recall what we have ever learnt later, a time after. Adaptability means that a person can adapt to his or her environment better or more easily.

1.3. Learning from the perspective of Pedagogy

The initiation ceremony of young people, living in a tribal community, can be interpreted as the first steps of formal education. They had to prove that they were physically and mentally prepared for the challenges of adult life. Both boys and girls had to be prepared for the ritual ceremony of initiation by persons selected for it. Young people did not learn subjects, but complex, life-like,

practical knowledge. It was not a "school" in the strict sense of the word, but it already included the initial concept of institutionalization. The first schools, the so-called temple schools, appeared in the riverside cultures at the end of the fourth millennium BC. The most important goal was the training of scribes. In the second millennium BC, the "board house" provided the common people with basic knowledge of writing, reading and arithmetic. Higher level education was provided by the "house of wisdom" (Pukánszky–Németh 1996).

Nahalka states that there are three very important concepts about learning. „According to the simplest idea, ready-made, already linguistically shaped knowledge is transferred to the learners with the help of language. We can call this »the paradigm of knowledge transfer«. The main point is that we are not in direct contact with the learning material, only with its linguistic description. Knowledge is transferred to the students from the head of the teacher or from written texts, through our language. In the »pedagogy of illustration«, we learn from our experiences, with the help of direct connections with the object of learning. Our vision, hearing, and other sensory processes play crucial roles in learning. It is the teacher's responsibility to ensure that children can experience the reality around them through their senses. In the »pedagogy of action«, activities play the most important role and the learners' active participation leads to learning” (Nahalka 2006: 12).

In pedagogy, besides the transfer of knowledge, it is important to focus on the development of skills, abilities, attitudes and values. When we focus on learning from the pedagogical perspective, we have to consider the characteristics of formal education and pedagogical work in schools. The operation of public education institutions, as well as the educational work carried out there, are determined by laws, regulations and legislation. The National Core Curricula precisely define the current and valid values of education, knowledge and learning. The curricula include the theoretical, substantive and conceptual foundations of the pedagogical tasks of school education. The main areas and contents of education, the main areas of development, educational goals, key competencies, and the development tasks of students with special educational needs are also defined.

According to Virág, at schools we deal with, “guided learning according to specific educational goals. Learning is not just memorization. It is a kind of operation and development of our cognitive functions like perception, memory, imagination, problem analyses, problem solving and thinking. Learning is also an action, because it includes the practical application of everything we have ever learnt, the learning of movements, different practical actions like psychomotor skills and the learning of socially desirable social attitudes and behaviour as well. Learning is the activity and development of the whole personality. In addition, we learn the methods and different techniques of learning” (Virág 2013: 17).

Lappints emphasises that the knowledge we gain through formal learning at schools can be considered as secondary knowledge because it is not based on our direct observation or experiences. In addition, the effectiveness of school learning depends on the quality of teaching, the learners' skills, motivation and the learners' personality (Lappints 2002).

2. Lifelong learning

Lifelong learning literally means that we learn from our cradle to our grave, at all stages of our life. Lifelong learning is also life-wide learning because learning is embedded in all of our life contexts like our family, schools, workplaces, different communities we join. In our early years we take part in informal learning and we learn through play and imitating our parents and environment. Learning from the age of six takes place in formal education from primary school to secondary or even higher education. During these years we can gain knowledge from non-formal learning like out-of-school activities, social organisations, religious institutions as well and even mass media

can play more or less role in our informal learning procedure. During our adulthood we can learn a lot from our work experience. We can develop and enrich our profession specific knowledge and skills as well. Examining lifelong learning from the perspectives of pedagogy and education policy, we have to mention John Dewey who played a significant role in establishing the concept. He emphasized that schools should focus on real-life activities, problems and gaining experience. Learners' actions and active participation are very important for motivation. In his opinion, schools should convey social life as well as establish and develop socially useful skills and abilities. In this way, schools can encourage students to continue learning and prepare them for life. The spread of the concept of lifelong learning began in the late 1960s and early 1970s. As a result of the accelerated economic and social changes in the 1970s, the concept of lifelong learning was used more and more consciously. Lifelong learning has become an important element of UNESCO's educational policy, in which the need to create the educational environment and learnable curriculum adapted to the needs of students also appeared. UNESCO represented a distinct, humanistic, holistic approach. The organization supported efficient and effective educational work and learning. All of this had an impact on the development and renewal of primary and secondary education, the development of vocational training and higher education as well. At the same time, learning needs also changed. More and more people wanted to learn, because it became clear to them that they needed to acquire new knowledge and skills in order to become successful in the world of work.

The perception of the OECD which was founded in 1969 and has been operating since 1970, regarding the concept of lifelong learning is significantly different from that of UNESCO, because this organization is an economically oriented one and therefore it focuses on global economy, economic growth, competitiveness, employability, sustainability, innovation and change.

UNESCO represented a humane, holistic approach to the development of education, training and culture. The organization envisioned this development with the involvement of the entire society and the implementation of an integrative and open society model. The OECD mainly focused on the economy, competitiveness and employment. With regard to education and training, the role of the individual, the individual's ability to act, and the active economic and social role were emphasized.

The concept of lifelong learning developed in the complex "learning society" model of the early 1990s. The strategic role of teaching and learning has become decisive in shaping the learning society. As a result, there is a focus on not only the development of basic skills, but also the deepening of work experience and professional qualifications. The European Council and the European Commission announced 1996 as the year of lifelong learning (Németh 2011).

In March 2000, the European Commission defined the strategic goal of making the European Union the most dynamically developing knowledge-based society in the world. The Commission asked the Member States to develop a system of basic skills to be acquired and developed during lifelong learning. After the preparation of the detailed work program, the group dealing with key competencies had to define the new basic skills. It was also important to explore how these skills can be integrated into curricula, how these skills can be learnt and maintained throughout life. The document prepared by the working group contained eight key competencies and also defined the knowledge, skills, abilities, attitudes and values belonging to each area (Demeter 2006). This approach re-evaluated the role of teachers. The task is not simply to transfer knowledge. The emphasis is on the learning process, in which students must be actively involved. On the one hand, individual needs and differentiation should be considered during the course organization. On the other hand, efforts must also be made to develop cooperation, problem solving, cooperation, critical and reflective thinking. It is obvious that lifelong learning has a lot of benefits for example we can

keep up with the constantly changing world, improve our knowledge and skills, build up new skills, become wiser. We can also overcome some barriers as well for example financial, mental or learning design barriers.

According to Jaques Delors, education in the 21st century has got four basic pillars. **Learning to know** means that the knowledge of different concepts helps to lay the foundation for learning. **Learning to do** enables learners to apply their knowledge and skill-based learning supports better adjustment. **Learning to live together** helps cooperation and understanding other people. **Learning to be** develops our self-esteem, self-confidence, autonomy and personal responsibility (Delors 2001).

3. The Learning compass

In our constantly changing world, everything is unpredictable, new generations have new experiences, expectations and in connection with it some questions can arise. How can learners be prepared for jobs that we have no ideas about? What knowledge they will need? What skills, attitudes and values have to be developed? Can we predict the new devices, technologies that will be invented? These questions became very urgent and as “a response, the OECD launched the Future of Education and Skills 2030 project in 2015. The main goal of the project was to help countries prepare their education systems for the future” (OECD 2019: 5).

Andreas Schleicher, Director of the OECD Directorate for Education and Skills said that “Our imagination, awareness, knowledge, skills and, most important, our common values, intellectual and moral maturity, and sense of responsibility is what will guide us for the world to become a better place” (Schleicher 2019: 5).

The first phase of the project focuses on learning for 2030. “The Learning compass shows the types of competencies students need in order to navigate towards the future we want, individually and collectively. Just as a compass orients a traveller, the OECD Learning Compass 2030 indicates the knowledge, skills, attitudes and values students need not just to weather the changes in our environment and in our daily lives, but to help shape the future we want” (OECD 2019: 12).

The Learning compass has seven elements. These are: 1. Core foundations, 2. Transformative competencies, 3. Student agency/co-agency, 4. Knowledge, 5. Skills, 6. Attitudes and values, 7. Anticipation-Action-Reflection cycle (OECD 2019).

Core foundations are very important because these areas are the prerequisites for our further learning. **Transformative competencies** are necessary to shape future for better lives. These competencies can help learners’ navigation across different problems, situations, dilemmas. **Student agency** means that learners realise their own potentials and can set up their own goals. They feel responsibility for their own learning in which they want to play an active role. **Co-agency** means that learners are in interactions with their parents, peers, teachers in their learning environment. An effective learning environment influences the learners’ sense of agency that influences co-agency of the learning environment. **Knowledge** can be divided in four groups. Disciplinary knowledge refers to subject-based, subject-specific knowledge. Interdisciplinary knowledge is important in understanding and coping with complex problems as we learn to transfer key concepts from one discipline to another. Epistemic knowledge helps learners to understand how they can use their knowledge and they can recognise the purpose and relevance of their learning. Procedural knowledge means that learners understand how things are done, what steps or action should be followed to complete a task. Among **skills** three groups can be differentiated. Cognitive skills include verbal, nonverbal and higher-level thinking skills. Metacognitive skills help us learning to learn. Social and emotional skills enable people to express their feelings and

thoughts as well as develop their own personality and build relations with community. Physical and practical skills include our manual skills and the way we use different tools and equipment. **Attitudes and values** influence our decisions, choices and our behaviour. Personal values define what lifestyle we choose, how we build up and lead our life. Social values influence our interpersonal relationships. Societal values determine the common principles that provide a framework for the social order. Human values can apply to the individual, community and global well-being. In the **Anticipation-Action-Reflection** cycle, learners understand their own and the others' intentions, then they act and after the actions they give feedback and evaluate their results.

4. An international project for future learning and future skills

Faced with the educational challenges of the 21st century, eight European Higher Education Institutions have initiated a cooperation in order to explore how they can contribute to the discovery and development of their students' future skills and abilities, individual and community well-being, and the creation of a better future. All principles of the Learning compass appear in the international project called The Regional University Network – European University (RUN-EU).

The regional partner countries of the collaboration are Austria, Finland, Hungary, Ireland, the Netherlands and Portugal. The full partners of this regional collaboration are Higher Education Institutions among which neither is situated in the capital cities of the countries. All universities represent a given region of their home countries where they play a significant role. Beside the full partners the alliance has different associated partners among which companies, firms, enterprises, cultural institutions, civil organisations can be found.

Within RUN-EU, work is carried out in eight work packages based on specific tasks to complete. In the alliance, interactions within and between the work packages help to achieve the project's objectives.

4.1. An inter-institutional research on future skills

In WP3 (Future and Advanced Skills Academies), we have started researching future and advanced skills. We would like to explore this topic from four different perspectives that include the policy makers, the teachers, the students and the employers' points of view. At this point, the results of this ongoing research are not public yet, only some elements can be shared.

In the **first phase** the focus was put on the perspectives of the **policy makers**. We examined through document analysis, what knowledge, skills, abilities, attitudes, values, and competencies are included in the official documents defining the functions of the higher education system. These documents include for instance, the Law of Higher Education, the requirements of different university courses.

The **second phase** highlighted the **students'** perspectives in focus group interviews. The students, selected by the Student Advisory Board, had the opportunity to exchange ideas and share their opinions on seven questions related to future and advanced skills.

The **third phase** of the research focused on the perspectives of **teachers**. The teachers had to answer the same questions as the students. All of this provides an opportunity to make comparisons.

In the **fourth phase** the **employers'** perspectives are going to be overviewed but this phase of the research is under planning at the moment.

4.2. Some results of the research

As mentioned earlier, all results of the ongoing research are not public yet. This is why only some research data can be presented now from the students' perspectives.

Students had to answer six questions that can be divided in three groups which are: future skills and their development, inspiring teacher and/or situation, Learning compass.

There were some students who only mentioned or listed the future skills and there were others who gave descriptions of the skills and abilities. It can be seen that mainly soft skills were highlighted. Soft skills cannot be associated with a specific program or study rather with behaviour and personality traits of an individual. That is why it is hard to observe or measure them.

Students feel that they can play a very important role in developing their own future skills. They have to take responsibility for their deeds and decisions, they have to be motivated and active in learning processes and they should be willing to learn. For students it is obvious that universities have to contribute to development of future skills with innovative approaches in teaching and learning procedures, inspiring students to think critically, providing safe teaching and learning environment.

According to their opinion it is important to take part in challenging and practical tasks and it is easier to learn if the knowledge transfer is embedded in playful situations and games. The learning situations that can be implemented outside the classroom are also very motivating.

The students' answers demonstrate that their teachers' motivation has a positive effect on the teaching and learning process. Students long for dynamic, active classes and to receive individual, constructive feedback on their performance. In addition to these, the students also want to get to know the human side of the teachers. Students are curious about their teachers' positive experiences and feelings and they want to discuss about these things.

It should be highlighted that students are not acquainted with the Learning compass. The research has not been finished yet and that is the reason why here and now only some partial results can be introduced.

Summary

Learning is the defining process of our lives, which accompanies us from the cradle to the grave. We gain knowledge, our abilities and skills develop, our attitudes change, and as a result our personality undergoes a continuous improvement. Learning is vital for us because it helps us to adapt to our environment and cope with different situations throughout our lives. We learn to think, we learn emotions, behaviours, verbal and non-verbal communication and interpersonal relationships. In a knowledge-based society, lifelong permanent learning affects the entire life of individuals and also the entire society. That is why it is very important to understand the reasons of studying, the meaning of studying and the consequences of neglecting studying. Aimlessness, under motivation, lack of self-awareness and the disorganization of our inner, mental world can affect our lives even in a negative direction.

The Learning compass 2030 can orientate the learners of the 21st century to find their own way and the competencies that are necessary for them to navigate towards the future they want, individually and collectively. It is important to take in consideration all elements of this compass in order to renew the teaching and learning procedure if we want to prepare the new generations for the challenges of their future. We have to identify and develop the future skills to support learners to adapt their environment and build a better world for themselves and find their well-being. That is the reason why, faced with the educational challenges of the 21st century, eight European Higher Education Institutions have initiated a cooperation in order to explore the ways of discovery and development of their students' future skills and abilities, individual and community well-being, and the creation of a better future. Hopefully this work will be successful.

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