21ST CENTURY TEACHER'S TRANSVERSAL COMPETENCIES: THEORETICAL ANALYSIS

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Abstract. *In the current situation, a significant part of the existing models of training specialists in the field of education no longer meet the conditions of the labour market. The most important pedagogical skills in the present time are significantly different from the skills that were relevant until recently. Knowledge is still important, but modern teachers also need to have transversal competencies to succeed in their professional activities.*
So, the research aim is to study the content of the phenomenon "transversal competences", which will make the process of their forming more effective.
To achieve the aim the scientific literature and pedagogical practice was analysed. It was found out that transversal competences are transferable and reusable skills that can be applied in a wide variety of situations and work settings. Transversal competencies are considered as 21st century skills and correlate mostly with human ability to solve problems, related to technological advances and intercultural communication.
The analysis of the sources revealed the inconsistency in the use of terms denoting the studied concept and considerable diversity in defining the content of transversal competencies, as different sources distinguish different sets of skills. Based on the framework of transversal competences worked out by UNESCO the modern teacher's transversal competencies were characterized in six domains: 1) critical and innovative thinking, 2) interpersonal skills, 3) intrapersonal skills, 4) global citizenship, 5) media and information literacy, and 6) others.
Keywords: *21st century skills, modern teacher, transversal competencies.*

Introduction

The current state of the society and the world in general is characterized by processes of globalization and modernization. Socio-economic changes, such as social equality, rapid technological progress, economic growth, sustainable development and environmental preservation, force mankind to adapt for further existence. In the current situation, a significant part of the existing models of training specialists in the field of education no longer meet the conditions of the labour market, which makes it necessary to update them taking into account the

challenges of civilization. It is increasingly recognized that to survive and thrive in a competitive, fast-changing and technology-driven world, it is necessary to possess transversal competences, which combine knowledge, skills, abilities and values that can be transferred from one professional context to another, provide transfer of learning and meet the challenges of the 21st century. Their value is based on the growing need of social and labour realities, in which specialized knowledge becomes obsolete very quickly, and the ability to implement universal knowledge to different situations is considered to be necessary in the modern labour market.

According to "Piloting a European Employer Survey on Skill Needs", employers and companies' preferences are grouped into lists of desired transversal skills which include such skills as "the capacity to organize oneself and plan the priorities, the capacity to integrate socially into a company structure, the ability to learn permanently adapting to new technologies, the ability to take initiative and be proactive and result oriented by solving problems and making decisions" (CEDEFOP, 2013). The companies outline the necessity for such skills like "working in a group (managing relationship with others, team spirit); flexibility to organize work in autonomy (organizing the priorities); communication skills (first, with customers, but also with colleagues, listening); being able to act in the context of the company (respecting the roles, recognizing the context, analysing the context, observing, listening, respecting the rules); recognizing their error, being able to accept criticism (asking for help when necessary, asking for feedback); capacity to act in complex situations (solving problems, managing stress – or even resistance to stress); desire to learn, curiosity; per-severance; politeness (together with kindness); keeping a positive attitude (proactive)"(CEDEFOP, 2013).

Taking into account the above said, the main priorities of higher education today in training future specialists for any spheres should be concentrated on forming transversal competencies that will give university graduates a competitive advantage when entering the labour market. These competencies are increasingly sought after by employers because they enable employees to better cope with daily challenges in the face of competition, rapid economic, demographic, technological and environmental change.

Transversal competencies are the cornerstone for the modern teacher as teaching methods, and, accordingly, the most important pedagogical skills in the present time are significantly different from the skills that were relevant until recently. Knowledge is still important, but modern teachers also need to have universal competencies to succeed in their professional activities. No matter, whether a teacher specializes in teaching Mathematics, Foreign language, Natural science or History, it is necessary that he/she possesses the ability to communicate, the ability to clearly express one's thoughts, interpersonal skills,

the ability to coordinate activities and manage people, leadership, emotional intelligence, etc. to perfection.

The above causes the need to study the content of the phenomenon "transversal competences" in the context of teacher profession, which will make the process of their forming in professional training more effective, which is the research aim.

Methodology

To reach the aim a qualitative research methodology was used for the study, thus data gained from existing literature are the most significant aspect of the study. They brought diverse background to the study and serve as the key approach to answering the research questions. Literature review approach, which involved synthesizing and analyzing existing sources, was adopted to the research. The rationale for adopting this approach is vital as "literature review is used to identify existing information on a topic and interpretable trends in a research area" (Pare et al., 2017). Essential themes were identified and collected from various literature sources through an inductive coding technique which according to Thomas (2006) "allows research findings to arise from important themes present in data without constraints posed by structured methodologies".

Theoretical background

Transversal competencies, also known as transversal skills, basic skills, key competencies, employability skills or 21st-century skills, have become a topic of great interest in recent years. Previous studies have demonstrated that these terms have been used interchangeably (Ghadermarzi & Mohamadi, 2022).

Although there are some differences in the way transversal skills are classified. They generally include skills such as collaborative problem-solving, digital competencies, learning to learn and continue to learn, initiative and independent thinking, adaptability, resilience, cultural awareness, expression (Whittemore, 2018); communication, teamwork, collaboration skills, planning and organizing, creativity, accountability, commitment to continuous learning, and client orientation (United Nations, n.y.); critical thinking, collaboration skills, communication skills, and innovation/creativity (The Ontario Public Service, 2016).

But evidence suggests the critical thinking, collaboration skills, communication skills, and innovation/creativity to be the core of transversal competencies (Trilling & Fadel, 2009; Kivunja, 2015).

To meet the challenges of the age of global technologies and economics critical thinking is a highly curial skill throughout life (Kivunja, 2015), it is the skill to solve problems (Stanford Encyclopedia of Philosophy, 2018). Critical

thinking possesses the ability to engage in reflection and reach a well-informed conclusion.

Collaboration skills are viewed by Trilling and Fadel (2009) as the ability to collectively make progress towards a common purpose or solve a common problem.

Communication skills involve giving and receiving different kinds of information (Maguire & Pitceathly, 2002; Tonekaboni & Nasiri, 2022), while creative thinking skills are the techniques used to approach an issue from different perspectives and develop a plan to evaluate it (Basadur et al., 2000; Alnamrouti et al., 2022).

Overall, transversal competencies are transferable and reusable skills that can be applied in a wide variety of situations and work settings, making them essential for success in the 21st century (Liu et al., 2021; Belchior-Rocha et al., 2022).

Results

The modern concept of education assumes that the teacher doesn't only have a subject and general pedagogical competency, but also universal ones. These skills are increasingly in high demand to successfully adapt to changes and to lead meaningful and productive life (MacKenzie & Polvere, 2009). Let's take a closer look at what transversal skills in teaching mean, and what necessary characteristics the teacher must have for effective professional activity and self-improvement.

In the regional study on transversal competencies in education policy and practice carried out by the leadership of UNESCO transversal competencies are defined as ones to include six domains: 1) critical and innovative thinking, 2) interpersonal skills, 3) intrapersonal skills, 4) global citizenship, 5) media and information literacy, and 6) others. The domain 'others' was created as a way for researchers to include competencies, such as physical health or religious values, that may not fall into one of the other (UNESCO, 2016).

Let's see these domains of transversal competencies in more detail.

Critical and innovative thinking. From a pedagogical point of view, critical thinking is a set of mental operations characterized by a person's ability to:
  − analyze, compare, synthesize, evaluate information from any sources;
  − see problems, ask questions;
  − propose hypotheses and evaluate alternatives;
  − make a conscious choice, make a decision and justify it.

Critical thinking is important for a teacher in organizing of the educational process. It helps to solve several important tasks: the selection of the content of educational material, the choice of forms and methods of organizing students' cognitive activity in the context of their personality development. When selecting

the material for the course construction, the teacher applies various elements of critical thinking, from the point of view of its reliability, relevance, practical utility, connection with other disciplines. It is thanks to the critical thinking of the teacher, who evaluates the material and builds the student's cognitive activity within the framework of this material, using various educational technologies and methods, that the traditional process of learning acquires individuality and becomes meaningful, continuous and productive.

Innovative thinking is the ability of an individual to possess systemic creativity, which ensures the birth of something new, the possibility of generating innovations that change the existing environment, the ability to look at the problem from different points of view, generate many ideas and possible solutions and improvise.

In teaching, creativity has always been an important aspect, but now it is gaining special importance, as it allows you to adapt to constantly changing conditions. Since teaching is an unpredictable activity, creativity is needed to deal with uncertainty. If the teacher is able improvise, adapt to the needs of students, be spontaneous, then he makes the most of all opportunities and get incredible results. A creative teacher has the ability to quickly come up with a large number of ideas; demonstrates flexibility in assessing problems and finding patterns, the ability to think outside the box, deepen and detail ideas, constantly absorb information, use various approaches to make learning more interesting, exciting and effective.

Interpersonal skills are often referred to as social intelligence. They include the behaviors and tactics that a person uses to interact effectively with others. The most relevant and valuable for the teacher are communication skills, teamwork, leadership, emotional intelligence, cooperation, sociability, collegiality, empathy etc.

New approaches to teaching dictate new requirements for the personality of the teacher, thereby educating teachers of a new generation, with a new type of thinking. Their task is to form a competent, social, successful personality. It is the teacher who has leadership qualities and abilities who can cope with the tasks. Today, a modern teacher is required to be competent in solving current and future problems. The main way to improve the quality of professional activity is a manifestation of leadership abilities, which means forming a comfort zone around oneself, developing students' desire for independent thinking, motivating them to understand the goal and the ways of its achievement, planning and organizing joint activities, responsibility for the results of the educational process, etc. The authoritarian style of teaching and interacting with students demonstrates ineffectiveness. The ability to lead helps to achieve mutual understanding and mutual respect between teacher and students; the ability to organize and direct teachers and students, both formally, and informally, increases the potential for learning.

Good communication skills are important for two reasons: to successfully convey educational information to students and to provide feedback. In order to teach students successful communication, the teacher should demonstrate communicative competence, implement the appropriate skills in life and professional situations. Developed listening, speaking, reading and writing skills are the hallmarks of a successful teacher. Communication skills are a necessary component of a person's leadership potential (Kovalchuk & Yermak, 2021).

Communication is a two-way process. It is both expressive and receptive. Teachers should be able to:

 − listen and understand the thoughts and ideas of your students;
 − express own thoughts clearly;
 − be able to break complex tasks into easy-to-learn steps;
 − be able to «read» the thoughts of their students.

The personalization of communication is equally important. A good teacher expresses sincere affection and interest in his students. Researchers emphasize that trusting relationship with students increases their motivation to learn. When the teacher-student relationship depends on the academic success of the second, this negatively affects the attitude to learning and interaction with others.

In order to establish effective communication, you need to get to know student's interests, character traits, perhaps even fears, find out what the student is uncertainty about, what he feels when faced with a difficult situation. It is important the student understands that he is communicated personally, and not with some "average student". The simple need to know a student by name, and, sometimes, by a nickname that has become closer to him, than a name is completely vital. The teacher cannot remain detached from the audience, indifferent, just those who gives knowledge. Sometimes it is worth talking to the audience in their language, learning the current vocabulary from modern sources of information. It is also important to celebrate the successes of your students and recognize their achievements, to emphasize their strengths. This is a great way to influence their learning.

In the modern digital world, communication has long gone beyond the "live". Effective communication today unthinkable without modern electronic means of communication. The use of technology makes communication accessible, easy, more understandable and closer to the modern student. Various messengers, allowing to exchange text, voice and video messages, stickers and photos, files of many formats, make video and audio calls, organize conferences, multi-user groups and channels, as well as the use of electronic educational platforms and programs for organizing videoconferencing has firmly entered the working environment of a modern teacher. So, the teacher should develop digital and media literacy to be a confident user.

It's necessary to note that the ability to work in a team is especially important in joint professional activities. It can include joint scientific work, solving

pedagogical problems, writing manuals and textbooks. Teamwork in the educational environment suggests that the team is not the sum of the efforts of several people, but a single whole, where each member of the group complements the other; knows the full extent of the situation and is aware of the goals, has a number of tasks assigned to him and is responsible for the implementation of each of them, is able to interact with other team members for the successful fulfilling the task. In teamwork, it is important that the general effect is qualitatively superior to the effect of the work of individuals.

Intrapersonal skills refer to a person's internal abilities and behaviors that help them manage their emotions, deal with challenges, and acquire new information. Such skills include self-discipline, self-awareness, persistence, flexibility, adaptability, self-motivation, compassion, integrity, and self-respect.

But it's worth to notify that it is emotional intelligence and adaptability that are of crucial importance for modern teachers.

In today's educational environment, teachers cannot distance themselves from students; they do much more than just teach their discipline. Teachers need to solve problems and be mediators, helping to reduce tensions between students (and sometimes and teachers). A favourable, comfortable educational environment is a condition that ensures the stable quality of the physical, mental and social health of the participants in the educational process by creating an emotional background that positively affects the development of the individual and reduces the adverse effects of other factors. To design such an environment, it is necessary to assess the real state of interpersonal relations in the pedagogical process, taking into account its components: pedagogical comfort, psychological microclimate, motivation, communications, management features of the socio-pedagogical educational environment. The teacher's emotional intelligence plays a major role in all of this. Developed emotional intelligence can help teachers perceive and be aware of their own emotions and what causes them, as well as constructively deal with them, demonstrate greater empathy for others, manage feelings for effective problem solving.

Adaptability is highly relevant to teachers given that "teaching work involves responding to and managing constant change" (Collie & Martin, 2016). The capacity to adapt in order to effectively manage these changes is crucial for teachers' work in the classroom, staff room, and beyond. To meet the changing needs of their students, teachers should be able to adjust their teaching pace, adapt activities to cater to different needs, and find alternative resources to explain key concepts effectively. They should also be able to regulate their emotions, exhibit patience, and come up with alternative solutions to unexpected situations in the classroom. Teachers should also effectively interact with colleagues under any circumstances, either when they require resources to teach a new part of the curriculum, or they need help to deal with a challenging student. Teachers must also adjust to the different priorities of a new principal or colleague, or calibrate to the style of a new teaching

aide in the classroom. Common change in most schools is connected with the changes in timetable that occur sometimes at the last minute. Moreover, teachers need to be ready to make changes such as halting a lesson midway or compacting content to manage time constraints. They are expected to be lifelong learners and incorporate their new knowledge into their teaching practice. Additionally, changes in curriculum or policy may require teachers to be adaptable.

Global citizenship. In the conditions of globalization and growing interconnections and interdependencies, there is a need to develop and spread a general ideology that would emphasize that, first of all, a person is a member of a global community of people, and not a separate nation. In order for the concept of a global citizenship and individual responsibility for the fate of the world community to spread and gain ideological strength, it should become a mandatory part of any educational program. Education with goals of global citizenship aims to development students' specific skills, knowledge and values, which will help to become conscious, responsible and active members of the world community.

By allowing their students to teach themselves, teachers can foster tolerance, respect for diversity, ethical and intercultural understanding, conflict resolution skills, democratic participation, respect for the environment, national identity, a sense of belonging, and other important traits. This not only helps create a more respectful atmosphere in the group, but can also help to communicate better with students from a variety of backgrounds.

Media and information literacy. National and international policy efforts are advocating that it has become essential for 21st century teachers to possess media and information literacy (MIL) – the set of competencies they need to critically evaluate information communicated through different multimedia sources (International Society for Technology in Education, 2015; BattelleforKids, 2019; Wilson et al., 2011).

A media-literate teacher has a knack for perceiving, considering, understanding and creating media information, assessing the socio-cultural and political context of the media functioning in today's world and skillfully uses mass media in professional activity. His key task is the systematic and competent education of young people, who must learn not only to use various media correctly, but also to understand the patterns of their behavior, to see how the media influence the personality. The teacher should also be able to teach students to think critically in the process of perceiving media products, to develop personal, evaluative attitude towards mass media products in general, based on ethical and aesthetic guidelines.

Additionally, it's necessary to stress that the ability to learn throughout life is more important for teacher than ever before. Exchange of knowledge and experience, as well as communication and learning from other teachers is an important part of the teaching process. Mastering some new knowledge and

acquiring new skills the teacher thereby gives students an example of effective learning.

Furthermore, an effective 21st century teacher should have his individual style which implies the orientation of the teacher to the process and learning outcomes, the adequacy of planning the educational process, efficiency in using means and methods of pedagogical activity. Intuitiveness, flexibility, caution, stability in relation to a changing situation, a stable positive emotional attitude towards students are also no less important dynamic characteristics of the teacher.

Conclusions

In conclusion, it should be noted that the 21st century changes in socio-cultural and economic situation caused changes in understanding effective teacher and his competencies. In order to be competitive in fast-changing and technology-driven world, the teacher should possess transversal competences, which combine knowledge, skills, abilities and values that can be transferred from one professional context to another. Transversal competences are generally considered as skills of the 21st century and are connected with the human ability to solve problems related to technological advances and intercultural communication, generate new ideas and possible solutions and improvise, interact effectively, be able to teamwork, leadership, reveal emotional intelligence, sociability, collegiality, empathy etc. Interpersonal and intrapersonal skills are considered especially important because of the many roles that a teacher can play.

Effective teachers are characterized by the presence of a certain set of positive personality traits, meaningful knowledge and pedagogical skills, combined with a deep understanding of their students and their learning needs.

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