

## Reflections: Prerequisites for quality learning in the 21st century

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### Abstract

Today's society requires competitive professionals who can respond operationally to ever-changing life situations, think creatively, focus their activities on achieving the goals set and this is why the new challenge of the 21st century education is to balance vocational and general education objectives to meet changing societal needs. One aspect that arises directly from the quality of education is reflection. The aim of this study is to find the implementation of learning reflection by teachers and how the influence of the use of reflection in the learning process. Depending on the results of this research, it will be clear whether the teachers will use reflection as teaching and learning method in their lessons at school. This research used quantitative method to determine the effect of reflection. The type of research is quantitative research using an online survey method. The results of survey certifies that 64% of teachers agree that reflection helps the students to sort out their thinking process and allows them to improve on their own and 72% of teachers answered that they would like to continue to use reflection activities at their lessons because students' curiosity can motivate them to engage in the learning process.

Keywords: Learning, quality learning, reflection, schools, students, teachers.

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## 1. Introduction

Given the global imperative that what is happening in the 21st century in the classroom needs to change while continually demanding diversification of skills as well as the complexity of teaching and learning, the teaching profession is no longer what it used to be. The teacher needs extensive knowledge, effective methodologies and learning strategies covering a number of dimensions. The pace of change is rapid, resulting in teachers needing different skills today than before. There is a heightened focus on what lessons are being taught in the classroom, what students have learnt and how they have been taught. The Education and Development Guidelines developed by the Latvian government for 2021-2027 offer a concept for ensuring quality education. It is expected an individual will be interested, motivated to learn and develop in a lifetime, able to use the acquired knowledge, skills and attitudes in a complex way, addressing challenges in changing real-life situations, thus being competent person, who has developed rolling skills, can build his own individual learning pathway through a variety of resources and has access to personalised support for realising potential and planning and guiding professional development (The Education and Development Guidelines, 2021). The priority areas identified in the OECD Skills Strategy 2019 (OECD, 2019) are strengthening learners' skills outcomes, promoting lifelong learning culture, reducing skills imbalances in the labour market and strengthening skills system governance. One of the goals of Latvian Education program is to bring into practice the concept of competency, which is interpreted as the ability of an individual to use knowledge, skills and attitudes in a complex way by solving problems in changing real-life situations and therefore the skills of the teacher lead to appropriate learning, analyse and reflection, collaboration, and if the actions of the teacher – teaching – are effective, then the learning outcomes of the student will be a deep understanding and competence (Skola 2030, 2019).

The aim of the research is to find the implementation of learning reflection by teachers and how the influence of the use of reflection in the learning process, using theoretical methods: the role of a teacher in the 21st century education and the value of education and importance of reflection and empirical methods: a survey of teachers about their experience.

### 1.1. Theoretical and conceptual framework of reflection

Today's society requires competitive professionals who can respond operationally to ever-changing life situations, think creatively, focus their activities on achieving the goals set. This is why the new challenge of the 21st century to education is to balance vocational and general education objectives to meet changing societal needs. Figure 1 (see Fig. 1) shows the model of the 21st century curriculum (Fadel, Bialik, & Trilling, 2015). It can be seen here that the field of knowledge transcends traditional disciplines, focusing on basic concepts, big ideas, meta-concepts and interdisciplinary topics such as thinking and digital literacy. The area of skills underscores the skills of the 21st century: critical thinking, creativity, collaboration and communication, while character skills add motivation, values, ethics, courage, moral and leadership traits that governs the development of knowledge and skills while, as part of meta-learning, thinking about how students plan, evaluate and regulate their thinking and actions to achieve their goals. The four dimensions are intertwined to highlight the holistic nature of education and provide a framework for transforming curricula (Fadel, Bialik, & Trilling, 2015).

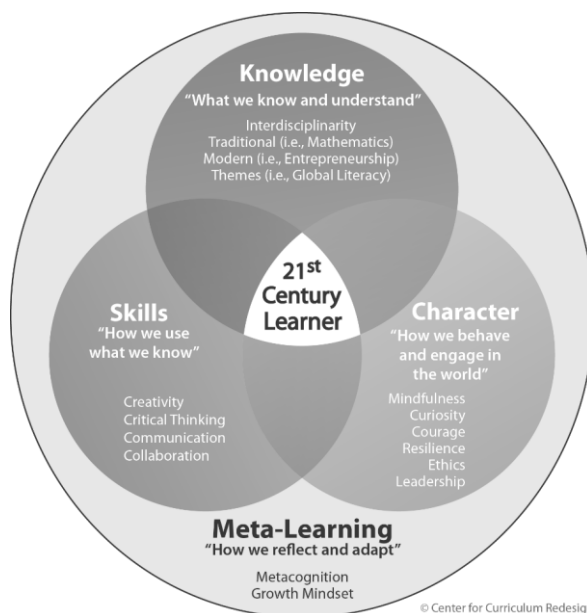


Figure 1. Framework for the 21st Century Education (Fadel, Bialik, & Trilling, 2015)

The constant and pronounced changes in today's world mean that teachers need to develop new competences to respond adequately to ever-increasing social demands. One of the essential social skills is communication and mutual cooperation between the student and the student's family, who should focus on mutual tolerance – tolerance and empathy are important qualities of a personality (Jurs & Samuseviča, 2018). The competences that teachers need to achieve relate to the tasks they need to perform; therefore, it is necessary to identify and understand them. Imbernón (2011) groups these tasks into three large interdependent categories: teacher and society, teacher and school as an institution, and teacher, student and class group:

- Teacher and society: the teacher must have a deep knowledge of the Community to incorporate Community cultural values and traditions into his practice, incorporate local contextual variables into the planning and management of the learning process.
- Teacher and school as institution: the knowledge the teacher has about the education system to integrate and adapt to full development, such as critical thinking, reflection ability, technical knowledge, adaptability, teamwork and collaboration, organisational capacity and administrative competence. All these competencies are highly desirable and provide a first glimpse of the new teaching competencies.
- Teacher and student, class group relationships are paramount. If a teacher is familiar with students, this will make it easier for them to tailor pedagogical interventions to the maturity, needs and interests of students. Teacher must find the best way to assess student learning process and pedagogical practice (Imbernon, 2011).

Rychen and Salganik (2003) explain that basic competences have individual bases and are very important at both personal and societal level and are used in different areas of knowledge. According to the authors, new competences must help cope with the growing challenges and challenges of modern society, such as rapid social and technological change, economic and cultural globalisation, increasing individual and social diversity, competition, liberalisation, value change, instability and inequality of norms, conflict of poverty in all its forms and ecological destabilisation (Rychen & Salganik, 2003). They

believe these problems affect different contexts at different levels, so traditional skills become insufficient. Thus, the development of higher-level mental skills becomes essential and thus offers three categories of significant competences: 1) an autonomous activity associated with relative autonomy and identity, 2) the interactive use of tools - an individual's interaction with the world through physical and sociocultural tools, 3) functioning in socially heterogeneous groups - the ability to interact with people (Rychen & Salganik, 2003). Each category covers a range of key competences: the ability to defend oneself and exercise rights, to develop and manage life projects and personal plans, skills to operate in a broad context, to use language, symbols and texts interactively, to use knowledge and information interactively, to be able to use new technologies interactively, to be able to communicate well with others, to cooperate and to resolve conflicts (Rychen & Salganik, 2003). Education is a national development tool and the success of all other sectors depends on the quality of education programmes and on teachers who are implementing curricula. The degree and quality of participation in society depends to a large extent on the level and quality of education acquired by members of society (Ocho, 2005). One of the benefits of the social lockdown due to the pandemic is that forcing school-based education to be moved home is an inadvertently triggered understanding of the importance of teachers. Authorities, parents and even students themselves have been more appreciative of teachers' work. The situation has led to an appreciation that learning success goes beyond digitizing didacticism (Griban, Griban, & Korotun, 2019). The 21st century demands a clear integration of learning strategies, digital competences and career abilities, and changes in education have begun to shift understanding of learning content, teaching and learning (Ledward & Hirata, 2011). The teacher is responsible for the entire learning process, which includes critical thinking, collaboration, communication and creativity. Equality and quality in education are the cornerstones of the education agenda, according to the findings of the World Education Forum (UNESCO, 2015). Conversion can only take place in a learning environment where learners can access and participate actively in high-quality learning activities.

The quality of education is a very common concept in the field of education, which is addressed in educational policy papers, specialised books and scientific articles, many educational science studies. The question here is to what extent the quality of concept education can translate into current educational practice so that it does not just remain an abstract construct with no real connection to day-to-day activities outside of school. One aspect that arises directly from the quality assurance of education is the reflection of didactic activity. A quality education process suggests what can be used, identify strengths and weaknesses and develop personalised solutions to the most challenging problems in the education space (Boud, Keogh, & Walker, 2005). The World Bank's report Learning to Realize Education's progress (The World Bank, 2018) shows that students, year after year, often learn less but learning abilities increase over time. The report highlights the need for low-performing students to get steady progress in learning, regardless of the shortcomings they have in starting the learning process. Educators should monitor the situation of each individual and provide differentiated, personalised, educational methods that will contribute to each progress.

Developing professional self-sufficiency is at the heart of learning experience. In response to change, it is necessary to refocus on theoretical approaches and academic engagement, reminiscent of conceptual frameworks related to education and attaining a professional level. Self-sufficiency is inextricably linked to reflection practice (Jones & Ryan, 2015). At present, the implementation and development of reflexive learning in the context of education is a common objective of education programmes. Studies (Loughran, 2002; Cowan, 1998; Moon, 1999; Johns, 2004) on the modelling and implementation of reflection in curricula concluded that the nature and organisation of reflection are determined by the political and social context of the country, the traditions and objectives of the educational institution. Analysis of most works (Whitaker, 1995; Moon, 1999; Sugerman et al., 2000)

makes it possible to discuss that the concept of reflective learning is aligned with the concept of learning based on the experience of the flask (Kolb, 1984), which underlines the importance of learner experience in the education process. The research, conducted by Bruns et al. (2016), says the time spent on tasks is too short to also be used for reflexing about feedback provided by teachers or assessing their performance. In addition, tasks cannot distinguish between key environmental aspects of the 21st century classroom, such as student engagement, effective use of learning strategies or emotional factors supporting the development of child (Seidman, Kim, Raza, 2018). The European qualifications Framework (European Commission, 2018) ranks reflection among the key competences a graduate needs to help learners and prospective professionals cope with challenges and changing situations, both in person and professionally.

Reflection is described in the context of learning as an intellectual and affective activity in which individuals engage to explore their experiences to create new understanding and recognition. This can happen in isolation from others or with others (Boud, Keogh, & Walker, 2005). Reflection is like a window through which a practitioner looks at himself and focuses on himself in his own context in experiences a person experiences himself and works to resolve contradictions in his practice between desirable and actual practice (Johns, 2004). Boud et al. (2005), discuss that reflection is a learning process through experience and from experience, a new understanding of self and practice. Reflexive practice is also seen as a lifelong learning process: one remains in the trap of unverified judgments, interpretations, assumptions and expectations if critical reflection practices are not developed. In reflective practice, personal beliefs and values are merged into professional identity. Teachers should use reflection practices to encourage active class participation. Active practice has been found to be an invaluable strategy in the classroom as it gives students hands-on activities that improve memory, increase interest and motivate learners (Boud, Keogh, & Walker, 2005). A reflective teacher is the one who takes past experiences and feelings into account when creating a new understanding. The teacher automatically knows what to do based on past experience. Schon (1983) defines reflective practice as a critical process when past and present actions are tested, knowledge is created to inform the future. He (Schön, 1983) distinguishes between two types of reflection: reflection during action and reflection about action. Reflection during action is defined as a person's ability to think about what is being done while the action is being performed, what works, what does not work, how other people respond to the action. Reflection about an action is defined as thinking behaviour after an action has been taken. This action is deliberate and thoughtful, often to change or improve behavioural outcomes (Schön, 1983).

Reflective practices have very specific meanings and related activities. Developed practices are like designs that have structures in place, they are identifiable, organized and systematically followed. They form the basis on which skills are developed and acquired (Loughran, 2002). Reflection is described as an active and ongoing review of person's beliefs and knowledge (Dewey, 1991), exploration of person's experiences (Boud, Keogh, & Walker, 2005) and a focused mental process (Moon, 2004). Reflection can be used to integrate theory with practice (Mezirow, 1991), broaden perspectives by reflecting on uncertain conditions (Kayes, 2002), achieve understanding (Marsick, 1988; Ryan & Ryan, 2013) and improve academic performance (Lew & Schmidt, 2011; Tsingos, Bosnic-Anticevich, & Smith, 2015). Reflection is seen as helpful in moving from classroom practice to working environments (Francis & Cowan, 2008; Heel, Sparrow, & Ashford, 2006).

Researchers have tried to explain the value of reflection. Moon (2002) says reflection will make it easier to diagnose both strengths and weaknesses and learn a question-asking approach. Sadler (1989) says this will develop self-assessment skills. The unspoken transfer of self-cognition (Smith & Pilling, 2007) to improving performance increases the value gained through learning and helps students to build

a learning strategy. A student who reflects, practices and demonstrates knowledge based on asking themselves questions about the situation in which he finds himself to create a new and different reporting system. The benefits of reflective practices affect teachers' professional development, didactic approach and students. The positive impact is also at school organisation level. The following advantages of using reflection practice are found: (Dewey, 1991; Finlay, 2008; Griffiths, 2000; Jay & Johnson, 2002; Leijen et al., 2014; Mathew et al., 2017; Pollard, 2008; Richards & Lockhart, 1996; Selmo & Orsenigo, 2014; Soisangwarn & Wongwanich, 2014):

- stimulating the process of change, growth, personality development;
- achieving excellence;
- updating and optimising the learning and learning evaluation process approach;
- improving learning practices and learning outcomes;
- networking of learning environments, learning experiences;
- facilitating the learning process by diversifying teaching strategies, differentiating and individualising the learning process;
- carrying out and implementing research-specific activities, integrating research into current educational practices;
- students' perceptions and understanding of their needs and learning patterns change, the determinants of learning processes at different stages of mental development;
- promoting self-cognition, self-assessment process; crystallising the sense of self-efficacy of the personality;
- increasing responsibility for learning;
- strengthening teamwork skills;
- stimulating mutual support;
- building authentic learning communities;
- feedback provided.

Reflective practices are necessary to take critical positions, make decisions, choose and act in a way that deviates from what is known or what has been adopted and takes different perspectives into account. Reflection promotes a willingness to take responsibility, believing that building and changing the course of events is within the power of all of us (Schleicher, 2018). Reflection is also listed as a key component of the process of self-regulated learning (Winne, 2001). Zimmerman (1986; 2002) describes self-regulated learning as a process where students are responsible for their own decision-making processes that govern some forms of knowledge themselves, and how they will be used. In addition, in the process of self-regulated learning, students set targets themselves, organise the learning process and use strategies to achieve the goals, manage and optimise available resources, monitor progress and continuously reflection (Zimmerman & Kitsantas, 2005). There are several models of self-regulated learning, such as constructive or socially cognitive, based on different theoretical perspectives. All these models include students' reflection as a key component during the learning process (Menekse et al., 2013; Quinton & Smallbone, 2010; Zimmerman, 2002). Reflection is generally more effective when it is a guided activity than as a solo activity (Sargeant et al., 2008). A teacher who helps a student through a



reflection process through advancing, open questions can steer the student towards a goal. Promoting the reflection process involves both students' cognitive and emotional abilities. Reflecting on person's emotional responses to a situation or information is as important in the learning process as reflecting on data or facts. By encouraging students to rethink their performance and the feedback they receive, students can understand, review and take responsibility for their progress (Sargeant et al., 2008). Schools need to be reflective organisations to create the conditions necessary for students and teachers to be reflective. Effective schools are those which successfully towards learning and growth for all their students beyond their usual expected growth rate (Barber & Mourshed, 2007). The two most important variables affecting student outcomes are the quality of teaching and school leadership. Setting high standards for individual students' achievements, measuring performance and keeping track of students' achievements compared to those standards, and then intervening once a student starts falling behind those standards is at the heart of an effective school. Schools that collect, analyse and reflect student achievement data then develop learning strategies to build student outcomes are likely to be effective (Barber & Mourshed, 2007).

On the basis of the above, it can be concluded that reflection competences are necessary for teachers, students and everyone. All these skills should be learnt in the 21st century, in order to be interested, motivated to learn and develop a lifetime, to be able to use the acquired knowledge, skills and attitudes in a complex way, by solving problems in changing real-life situations, thus to be a competent person, can build own individual learning pathway using different resources and has access to personalised support for realising potential and planning and guiding professional development (The Education and Development Guidelines, 2021).

### *1.2. Purpose of the research*

To use knowledge, skills and attitudes in a complex way by solving problems in changing real-life situations reflection is essential because students learn to choose and use the right strategy in solving problems based on understanding the concepts and that are appropriate for the problem situation, explaining the chosen strategy logically, and having a positive view that supports it. If the teachers use reflection effectively, then the learning outcomes of the student will be a competence and deep understanding. In this case, the researchers try to answer the following research questions:

1. Is the reflective practise help students sort out their thinking process and allows them to improve on their own?
2. What is the effect of using reflection in the teaching and learning process?

## **2. Research methodology**

The type of research used by authors is quantitative research. The quantitative methodology seeks to obtain accurate and reliable measurements that allow a statistical analysis (Queirós, Faria & Almeida, 2017).

67 teachers from different high schools of the same region participated in the survey. The survey was conducted in September 2022, with respondents' average seniority of 23 years, while respondents' average age is 51 year. The survey identified the practise of teachers and their experience, type of sample: systematic or mechanical sample.

In this study, researchers use online survey using the Google Survey platform. The online survey used by researchers contained 3 open-ended questions that required short answers from respondents. The results of the empirical study are representative and result in case studies. The results are necessary

to obtain a feasibility study on existing pedagogical realities in order to carry out further research on this basis.

### Results

As mentioned above, in the context of the teaching process, reflective practice is required in order for all who are involved to take critical positions, make decisions, choose and act in a way that deviates from what is known or what has been adopted and takes different perspectives into account. Reflection promotes a desire to take responsibility, believing that building and changing the course of events is within the power of all of us (Schleicher, 2018). As a result of the current study, teachers expressed rather positive views on the benefits of using reflection in the learning process. 59 (89%) of teachers have indicated that students can develop a deeper understanding, 47 (71%) of respondents answered that students can develop informed decision-making skills, 30 (45%) of teachers mention it is the possibility to set goals, 43 (65%)– answered that students become proactive and confident.

The survey also identified the experience of teachers in context of the reflection activities which help students sort out their thinking process and allows them to improve on their own. 43 (64%) of respondents agree that reflection helps the students to sort out their thinking process and allows them to improve on their own but 24 (36%)– disagree. Teachers who disagree discuss that this strategy is not 100% effective for all students, so other strategies would need to be implemented to help students to improve their thinking process. The opinions of the participant teachers are supported by Larsen, London, and Emke's (2016) research. It indicates that different perspectives and alternative ways of solving problems can be generated in reflection process.

48 (72%) of teachers answered that they would like to continue to use reflection activities at their lessons because students' curiosity can motivate them to engage in the learning process, reflection activities provide a safe environment where students can explore and articulate emotional responses, making reflection activities a part of a lesson encourages students to engage in the reflective and learning process, help them improve their performance and development over time, and signals to them that critical reflection is a worthwhile and valued activity. This coincides with the recognition expressed by Boud, Keogh, Walker (2005) that reflection in the context of learning is an intellectual and affective activity in which individuals engage in cognisance of their experiences in order to create a new understanding and recognition that can take place in isolation from others or with others (Boud, Keogh, & Walker, 2005).

### 3. Conclusion

The importance of reflection in the learning process mentioned above is being updated and purposefully implemented in the education system in Latvia in recent years. Teachers are trying different forms of implementing reflection in the learning process, seeking for effective methods of using reflection that would help students learn and engage in the learning process. However, this experience also shows that theoretical knowledge and understanding of concepts and their meaning are not enough for an effective process, as in practice different challenges, problem situations, issues that encourage a closer look at the current situation at school, the willingness of teachers and students to pay more attention to the reflection process, to understand how this process is seen by all stakeholders. Also students' unwillingness to engage in the learning process suggests what pedagogical strategies and methods, including reflection, in the context of a student-centered approach, it would be necessary to choose what orientation of education towards sustainability, ensuring the student's ability to take responsibility for their learning, that is learning content and the use of skills, addressing real situations and challenges.



Curiosity, a desire to wonder, open thinking and a desire for growth have all been cited as motives to engage in meaningful learning in the works of both Dewey (1991) and Selkrig, Keamy (2015). A study conducted as part of this article shows that reflection can lead to deeper understanding, students can develop informed decision-making skills, it is an opportunity to set goals, and students become proactive and confident. Results from the study show that teachers are aware of the importance of reflection in the learning process, but they do not use it fully. This situation could be explained by insufficient knowledge focused on developing reflection practices and the need to provide teachers with appropriate tools for these practices.

Based on the analysis of literature and the findings of the study, the authors of the article believe that educational preconditions should be created to enable teachers to share, debate, test ideas, techniques, activities and materials, where teachers are paid time to prepare and evaluate materials, thus motivating teachers to engage and develop learning content, which in turn would also help students to improve. A paradigm shift in education, which emphasizes activities that promote engagement, collaboration, skills acquisition, feedback and reflection while respecting a student's goals and goals during the learning process, necessitates exploring how to provide support to a student during the learning process so that learning can be effective by fostering the development of responsibility, knowledge and skills, as well as self-awareness through targeted student learning-oriented pedagogical processes.

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### **Author Contributions**

The authors contributed to this article as follows: all authors conceived the idea of this study.

### **Conflict of Interest**

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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