

Evaluation of the Impact of Collaborative Teacher Learning

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Abstract

This chapter summarises the findings of the EFFeCT project, in order to finalise the framework and methodology elaborated by the project team in terms of evaluating the impact of collaborative teacher learning essential to individual and societal development and when facing the challenges of the rapidly changing multi-level societal needs in the era of social uncertainty and unpredictability. The analysis conducted within the project has revealed that collaborative teacher learning is one of the most appropriate tools for removing the existing barriers to successful transformations and when seeking to achieve remarkable changes needed by every school or education system. It can be explained by the peculiarities of collaborative teacher learning which combines all types of learning (cognitive learning, affective learning, learning through practice) and provides a common open platform for learning and change/improvement of individuals, as well as society and organisations, also including the building of a joint vision for our unknown future. As collaborative teacher learning is closely linked to the work and role of the teacher in the learning process, and this combines traditional, multidisciplinary and interdisciplinary teaching and learning strategies depending on the educational goals, the authors also provide a comparative analysis of different aspects of these strategies from the perspective of collaborative teacher learning. The system of measuring the impact of collaborative teacher learning as elaborated within the EFFeCT project systemizes and elaborates different aspects based on which evaluation of the impact of this type of learning can be realized using appropriate key elements as measurement indicators.

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Introduction

At the forefront of learning, the 21st century is witnessing the diversity of key issues that have never been so inevitably important before. As in chapter 2 of the e-book mentioned earlier, the undergoing paradigm shift in social development from a Newtonian to a quantum paradigm (Zohar, 1997) in first line deploys the importance of proactivity, learning how to live with uncertainty or unpredictability, with no hierarchy, networking, etc. It looks very similar to the approach of UNESCO in the World Report Towards Knowledge Societies (UNESCO, 2005), particularly when analysing the trends of societal changes towards knowledge economies. Moreover, the newly published framework of future competencies for curriculum change for Education 2030 published by the UNESCO International Bureau of Education (Marope, 2017) emphasizes a key set of competencies that are relevant for today's learning with a major focus on various key issues (covered below) and their importance for today's learning (in order of relevance):

1. lifelong learning (curiosity, creativity and critical thinking);
2. self-agency (initiative/drive/motivation, endurance/grit/resilience and responsibility);
3. interactively use of diverse tools and resources (impactful use of resources, efficient use of resources and responsible consumption);
4. interacting with others (teamwork, collaboration and negotiation);
5. interacting in and with the world (being local and global, balancing rights with privileges and balancing freedoms with respect);
6. trans-disciplinary activities (STEM, Humanities and Social Sciences);
7. multi-literateness (reading & writing, numeracy and digital literacy).

When speaking about ten major global trends that challenge our conceptions of education and learning in today's world, Groves, Hobbs and West-Burnham (2017) mention: i) increasing life expectancy, ii) global migration, iii) changing our environment, iv) living in a virtual world, v) friendships, families, and relationships becoming more flexible and varied, vi) economic activity becoming less and less likely to be defined as employment, vii) well-being, lifestyle, and life expectancy being seen as interrelated factors, viii) personal identities formed not given, ix) the meaning and nature of democracy changing and becoming less certain, x) the world becoming increasingly dangerous. What is apparent – i.e. that all changes provoke traditional learning and require very efficient and immediate transformations in education which are not easily to be achieved because of several key factors as described in chapter 3 of this e-book. It is paradoxical that the most powerful resistance to change in learning experiences at schools is the attitude of colleagues from various teaching staff/colleagues who are not well prepared for collaborative and interdisciplinary approaches, as such ways can require paradigm shifts in society, involving new curriculum vision, and new experiences to be used in teaching practice.

1. Collaborative teacher learning – framework for evaluation

The framework for collaborative teachers' learning encompasses four main aspects – understanding the concept of education, the purpose and outcomes of learning in the present society, the work and role of a teacher, and tensions for education systems' consistency and self-renewal.

All four aspects fully incorporate the need for collaborative learning perspectives and insist on prescriptive strategies in terms of how to facilitate collaborative teacher learning. From the point of view of the EFFeCT project, teachers are agents of change and their collaborative learning is essential for individual and societal development which is in line with: 1) the concept of education, 2) the purpose of learning and its outcomes, 3) the success of teachers' work, 4) education systems and their self-renewal. These aspects will be analysed separately.

1.1. The concept of education

The concept of education is often confused with the definitions of learning, teaching, schooling or training, and these are not the same. According to Furedi (2009), education is the process whereby one generation initiates the next generation into the ways of the world, passing on the knowledge they need to make sense of it. On the other hand, nowadays there is another disposition stating that education is a process which is rather of a participative nature than of a transmission-guided nature, and this sets out the platform for the EFFeCT project (see chapter 2.1.); though these two education processes may have complementary character. What is evident and commonly agreed is that education is not restricted by the schooling process, but is a lifelong issue combining formal, informal and non-formal processes. For the purpose of this e-book, we might say that education is about lifelong learning processes improving our ability to live together across generations.

As argued by Biesta (2009), education has three major functions:

1. qualification of and for children, young people and adults; this is how all of us become able to 'do something';
2. socialisation – education is normally the best way to equip us with a set of 'rules' about how we act and interact within certain society; and
3. subjectification – a process in which an individual gains autonomy and independence in thinking and acting.

1.2. The purpose and outcomes of learning in the present society

The EFFeCT project defines learning in chapter 2.1. of this e-book and it focuses on 3 dimensions of the learning process – cognitive learning, affective learning and learning through practice, which is seen from two pedagogical models – a transmission model and a participative or constructivist model.

If we look at the present understanding of the purpose and outcomes of learning at a more general level, there is a certain variety of terminology used to describe contemporary learning processes and their outcomes, including - ‘competencies for life and work’ (UNESCO, 2017; OECD, 2018), ‘21st century skills’ (Partnership for 21st century Learning, 2007), ‘mastery of life’ (Latvia. Human Development Report 2015/2016, 2017) and others. Since 2006, when the Recommendation on Key Competences for Lifelong Learning was adopted by the European Parliament and of the Council, this became the commonly agreed and recognized framework for education in Europe, defining eight key competencies that should be the main long-term goals and outcomes of learning. As stated in the Recommendation:

“Competences are defined here as a combination of knowledge, skills and attitudes appropriate to the context. Key competences are those which all individuals need for personal fulfilment and development, active citizenship, social inclusion and employment.

The key competences are all considered equally important, because each of them can contribute to a successful life in a knowledge society. There are a number of themes that are applied throughout the Reference Framework: critical thinking, creativity, initiative, problem solving, risk assessment, decision taking, and constructive management of feelings play a role in all eight key competences” (European Parliament and Council:13-14, 2006).

1.3. The work and role of the teacher

The EFFeCT project is about collaborative teacher learning which is closely linked to the role of the teacher in the learning process. For the past two decades there have been several new considerations about how and under what circumstances we should re-think the work and role of the teacher. Consequently, the authors have identified combination of traditional, multidisciplinary and interdisciplinary teaching and learning strategies while working with teams of teachers from four schools in Latvia. The comparative analysis of these teaching and learning strategies from the perspective of CTL is shown in Table 1.

Table 1 – The comparative analysis of traditional, multidisciplinary and interdisciplinary teaching and learning strategies from the perspective of CTL

The aspect described	Traditional content driven learning and teaching strategy within separate study disciplines	Multidisciplinary learning and teaching strategy	Interdisciplinary learning and teaching strategy
Curriculum organisation and its characteristic features	The curriculum is usually separated into different subjects with sub-themes	The curriculum is usually a joint theme or topic chosen by the pedagogical staff - still to be realised independently within traditionally separate school subjects	Curriculum is usually problem based and goes beyond the borders of traditional subjects and themes requiring integration of knowledge from different study disciplines
Elaborators of the curriculum	Elaborated by the state and school	Elaborated by the state and school	Uses the state or school elaborated curriculum for implementation by interdisciplinary teams of teachers
The direction of teaching and learning initiatives	Top – down learning and teaching process for knowledge, skills, values, beliefs etc. - transmission	Top-down learning and teaching process of transmission; sometimes teachers may change teaching strategies	Can be both – top-down or bottom-up learning and teaching processes depending on the problem to be solved during the learning and teaching process
The role of teachers and the character of collaboration among teachers	Teachers are agents of transmission. Collaborative teaching and learning strategies are used during lessons and sometimes for project activities following the curricular requirements. Mainly teacher – student collaboration.	Teachers are agents of transmission. Collaborative teaching and learning strategies could be quite regular between teachers and students. However, there can be some collaboration among teachers in projects, though this is not compulsory.	Teachers are agents of change; learning and teaching process requires regular collaboration among teachers and students. Collaborative teaching and learning strategies are the precondition for linking studies to real life situations and when solving problems in interdisciplinary heterogeneous teams.
The key players/stakeholders involved	There are three main key players – school management staff, teaching staff and learners. Parents are involved depending on the perceptions of the development paradigm by society.	The key players are involved according to the needs of the topic/theme. Normally – management staff, teaching staff and learners who are sometimes joined by parents, local community etc.	There is a network of key players: management and teaching staff and students, according to the needs – parents, local community, entrepreneurs, district, state or international participants involved depending on the problem to be solved during the learning process.
Measurable outcomes	Characterized by knowledge, skills and understanding of values and beliefs, measured by effectiveness of teaching and learning process.	Characterized by knowledge, skills, values and beliefs which can be experienced or measured by effectiveness of teaching and learning process, development of collaborative skills, life skills and cross-over skills.	Characterized by disciplinary and interdisciplinary knowledge and the ability to apply them in problem solving, life skills, cross-over skills, distributed leadership and entrepreneurial skills.

As seen in the Table 1, teachers' collaboration is needed for each of the teaching and learning strategies. However, the 21st century challenge lies not so much in the multidisciplinary or interdisciplinary approach, but mainly in how we can change traditional teaching and learning to make them more appropriate for the contemporary world and its needs. Despite the transformations which constantly take place in modern society, teachers' lifestyle and professional development strategies do not quite fit when overcoming the inappropriateness of traditional learning for today's needs. Based on the research results explained in chapter 2.3. and the variety of examples in chapters 2.4., 2.5., 3.2. and 3.3. of the present e-book, it can be concluded that **collaborative teacher learning is one of the most appropriate tools for removing the existing barriers and achieving remarkable changes that every school or education system needs.**

1.4. The pressing need for education system consistency and self-renewal

Education systems are fragile mechanisms on the one hand, and very conservative on the other hand. In terms of fragility, over the past 20 years we have been facing unprecedented demand for immediate transformations across education systems. Millennium Development Goals (UN, 2000), Education for All goals (UNESCO, 2000), Sustainable Development Goals (UN, 2015), Education 2030: Incheon Declaration and Framework for Action (UNESCO, 2015) - these are only some of the examples from the global political scene demanding that immediate action be taken across education systems, not taking into account academic research which calls for change in pedagogical practice because of the lack of students' motivation to learn etc. The OECD PISA review, which focuses on formal schooling systems and their achievements, has even made it very evident that in most European countries changes in education systems are too slow and that the need for systemic change is evident. In fact, the tensions have been so huge for two decades that this change has become almost an unmanageable obstacle for education systems. It is challenging to understand what, why, how and in what situation one can make changes while everybody is demanding and expecting some expertise in order to focus attention on these issues. Even though so many changes have already been implemented, the urge for more changes make the real implementers, the teachers, think: what else should we change and what is the backbone to be preserved so as not to destroy the system itself. In such a situation, three issues: visible learning by Hattie (2009; 2012; 2015), experiencing how to transform teaching practice by

Hargreaves and Fullan (2012) and coherence by Fullan and Quinn (2016) are a few examples of how the education community is trying to improve the effectiveness of variety of tools available for change.

In general we can see the approximate next steps which are necessary in terms of particular issues for changing education systems: i) stakeholders (parents, local community, state officials, entrepreneurs, etc.) demanding change in teaching and learning practices, ii) three interconnected major topics - inclusive education, sustainable development and citizenship education, iii) systemic changes within the education complex which could be outlined using terms such as - school climate, school environment, personal leadership, systemic leadership and distributed leadership, iv) alternative ways and strategies to bring about educational change, such as an arts-based approach, the increased role of non-governmental institutions or non-formal education methods, etc., and v) changes and tools that transform education without education – technology development, social media, considerations of overpopulation, climate change, new research findings about the limitations and opportunities we all have (brain research, neuroscience etc.).

Light and Cox (2001), when explaining a critical matrix of learning and teaching in higher education, mention five learning gaps which influence changes, these five being in line with the gaps for change that were also identified during the EFFeCT pilot projects – the gap between recall and understanding, the gap between understanding and ability, the gap between ability and wanting to act, the gap between wanting to and actually doing and, finally, the gap between actually doing and ongoing change. From the perspective of overcoming these learning gaps, collaborative teacher learning is a relevant channel for change, because it covers not only the five learning gaps, but also implies most of the necessary trends for education system transformations. The present e-book provides more detailed explanations of what and how CTL can be used for the change of education, for learning and teaching practice and to assist education systems leading to further self-renewal.

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achievements has even made it more evident for most of the European countries that changes in education systems are too slow and the need for systemic change is evident. In fact, the tensions have been so huge for two decades that this change has become almost an unmanageable obstacle for education systems. It is challenging to understand what, why, how and in what situation to make changes while everybody is demanding and expecting some expertise for spreading light in these issues. Even though there are so many changes already implemented, the urge for more changes make the real implementers – teachers ask – what else to change and what is the backbone to be preserved not to destroy the system itself. In such a situation, visible learning by Hattie (2009; 2012; 2015), experience how to transform teaching practice by Hargreaves and Fullan (2012) and coherence by Fullan and Quinn (2016) are a few examples of how education community is trying to tackle the effectiveness of variety of tools available for change.

In general we can see the approximate trends which are demanded by particular issues for changing education systems: i) stakeholders (parents, local community, state officials, entrepreneurs, etc.) demand for teaching and learning practice change, ii) three interconnected major topics - inclusive education, sustainable development and citizenship education, iii) systemic changes within education complex which could be outlined by terms like - school climate, school environment, personal leadership, systemic leadership, distributed leadership, iv) alternative ways and strategies for education change like arts-based approach, increased role of non-governmental institutions or non-formal education methods, etc., v) changes and tools that transform education without education – technology development, social media, overpopulation, climate change, new research findings about the borders and opportunities of human beings (brain research, neuroscience etc.).

Light and Cox (2001) when explaining a critical matrix of learning and teaching in higher education, mention five learning gaps which influence change that are in line with the gaps for change that were identified also during the project EFFeCT pilots – the gap between recall and understanding, the gap between understanding and ability, the gap between ability and wanting to, the gap between wanting to and actually doing and, finally, the gap between actually doing and ongoing change. From the perspective of overcoming these learning gaps, collaborative teacher learning is a relevant channel for change, because it covers not only the five learning gaps, but also implies most of the necessary trends for education system transformations. The present e-book provides more detailed explanations of what and how CTL can be used for the change of education, learning and teaching practice and education systems leading to further self-renewal.

2. Collaborative teacher learning practice – the case of the EFFeCT project

When setting out the framework of collaborative teachers' practice, competencies for future, teachers and learners being aware of changes in society and in organisations and the challenges faced by teachers, the major questions are: "What are the benefits of collaborative teacher learning?" and "What is the relevance of CTL if we seek to overcome the challenges that are identified by any EFFeCT project partners?" If we can draw a conclusion from all the previous chapters of this e-book, we can identify three main benefits of CTL:

1. CTL is a way to approach and deal with all the types of learning (cognitive learning, affective learning, learning through practice) that are crucial for teachers' professional work and their well-being;
2. CTL provides a common open platform for learning and changes in individuals, society and organisations including also the building of joint visions for the unknown future;
3. CTL gives a clear set of indicators about how to measure collaborative practices and their efficiency. There are four particular indicators – participative professionalism, deep levels of collaboration, and equity and deep learning which are described in detail in Chapter 3.1.

Table 2 – The ways of evaluating the impact of collaborative teacher learning based on the findings of the EFFeCT project

No	The aspect based on which the evaluation of the impact of CTL is to be realized	Key elements to be considered	Chapter in the e-book
1.	Based on the type of learning that takes place during the CTL process	Definition of learning, cognitive, affective, practical learning	2.1.
2.	Based on the CTL definition; good practice and the principles that characterize CTL.	Participative professionalism, deep level collaboration, equity, deep learning	2.1., 3.1.
3.	Based on the purpose of the CTL	Interaction between individuals and organizations for societal, institutional and individual transformations, shift in learning paradigms	2.2.
4.	Based on the diversity of participants that are engaged in CTL and the analysis of benefits of CTL from collaborative practice	Teachers – teachers CL Teachers - students CL Teachers – parents CL Teachers – local community CL Teachers – teacher educators CL Teachers – education policy makers CL	2.3.
5.	Based on the outcomes of CTL	School level – local community level – district level – national level – international level	2.4.
6.	Based on the necessity of CTL as the most appropriate tool to achieve goals	Collaboration as a process, reflexion process	2.5.
7.	Based on the contextual considerations which influence success or failure of CTL	Six key areas: management, infrastructural, curricular requirements, cultural factors, attitudes, knowledge	3.2.
8.	Based on the analysis of factors that impact CTL	Strategies and elements that promote collaborative learning within the educational complex	3.3.

Table 2 – “The ways of evaluating the impact of collaborative teacher learning based on the findings of the EFFeCT project” is created having summarized the conclusions made by the entire project team in different chapters of this e-book. This will show the classification of different aspects of CTL, and the key elements, based on which the evaluation of its full impact can be made.

3. Recommendations for practitioners for measuring the impact of CTL

1. Decide what you understand by Collaborative Teacher Learning.
2. Agree on what the results, changes and practice are that you would like to realize using CTL. Think of visions for change, principles and practices that should be managed and focus on results for individual, organization and society transformation.
3. Think who should be engaged in such collaborative teacher learning and link this directly to the available models for CTL.
4. Model practical outcomes for students, teachers, school administrators, local communities, as well as district, national or international practice.
5. Find out when and how much time you have for CTL.
6. Review other strategies available to achieve outcomes you wish to succeed with and consider whether CTL is the most appropriate for these situations.
7. Identify what kind of contextual areas have a direct link to your eventual success when using CTL.
8. Focus on the education complex and strategies that influence and facilitate CTL.
9. Now read back over the whole list of eight practical points offered for stakeholders hoping to gain a holistic picture of CTL and the approaches to the evaluation of its impact.
10. Be assured – CTL has a huge impact on teaching and learning practice, but it starts with your decision to join, share and apply it.
11. Decide what you understand by collaborative teacher learning.

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