SETTING UP BLENDED LEARNING AT SCHOOL: LEADERSHIP PERSPECTIVE

Maija Kokare
Jazeps Vitols Latvian Academy of Music, Latvia

Karlis Strautins
Liepaja University, Latvia

Abstract. *Effective, meaningful and balanced use of information communication technologies (ICT) for teaching and learning is essential for meeting challenges of 21st century; however, practices of blended learning (a combination of face-to-face and online instruction) in Latvia are rather developed by particular teachers than organized as evidence-based policies of ICT integration in teaching and learning at schools. The research is aimed to explore the issues related to setting up blended learning as school policy from leadership perspective, and is designed as the case study by combining: 1) piloting results of the program "Curriculum design for Blended Learning" for leadership teams (5 secondary schools in Latvia); 2) developing the self-evaluation tool for school readiness for blended learning; 3) analysis of the main leadership challenges for setting up blended learning in schools. The study results contribute ongoing processes of introducing blended learning at schools by linking both leadership, management and pedagogical perspectives.*
Keywords: *Blended Learning, Leadership at School.*

Introduction

Widespread use of information communication technologies (further – ICT) in schools requires from teachers not only competent use of technical tools, but also a new kind of understanding of why, how and when technologies support students learning, as, although the value of ICT in education mainly is based on turning classroom processes from instructionism to constructionism (Derry, 2009), UNESCO (2011: 18) reported that "…the vast majority of educational systems, schools and classrooms around the world still participate in the mass production paradigm and technology is rarely used, even when it is readily available". Reports justify that technology has untapped potential for education, for instance, recent research about internet habits of young people (14-17 years old) in Latvia concludes that "…using the Internet is 'encapsulated' in the field of leisure and pleasure, and its use for learning or practical solutions is not a priority". (Rubene, 2017)

Besides, by acknowledging that "technology is presented as a key component of a strategy for 'personalizing education', […] yet there is little evidence that technology makes a significant difference to learning outcomes and student engagement", the future school is placed 'In Between Time' – between an old education system and emerging systems "which lack specificity and clarity". (Murgatroyd, 2016: p. 9) Therefore, not just the use of ICT could be the solution for future schooling, but rather strengthening the adaptive capacity and resilience of a school, development of new learning culture that would reduce the gap between the knowledge gained at school and the actual needs of the students. Nowadays children and young people find it natural to be both in the digital (online) reality, and in the actual (offline) reality, and they require education that would embrace both these environments without ignoring any of the important parts of their experience.

The study conceptualizes and explores blended learning in the context of general education of Latvia and uses the meta-analysis of blended learning effects on teaching and learning (Means et al., 2013) to justify its value at school. The study is focussed on reflecting the current situation of blended learning in Latvia and on revealing the main leadership challenges related to setting up blended learning in schools. It is based on the case study of piloting the program "Curriculum design for blended learning" which as a part of the ERASMUS+ supported project (No. 2015-1-LV01-KA201-0013406) was implemented for leadership teams of 5 secondary schools (chosen from different regions) in Latvia during school year 2016/2017. The project aimed to provide resources (Toolkit) and training for school teams of how to transform traditional schooling by combining online and offline teaching-learning experiences. Self-diagnostic tool for assessing readiness of a school for blended learning developed during the project is adapted for analysis and illustration of the process of introducing blended learning in schools after the piloting the program.

The study uses statistical analyses (SPSS) of the results from 3 questionnaires that is developed as self-diagnostic tool (2 questionnaires for teachers, $n_1=112$; $n_2=66$ and 1 for students, $n=103$) for assessing readiness for blended learning and qualitative analysis of structured interviews with the headteachers of the schools which participated in the piloting nine months after the pilot to unfold leadership challenges for introducing blended learning in their schools.

The Concept of Blended Learning for Schools

There are different blended learning definitions and models. Most popular representation of blended learning is "…a combination of onsite (i.e. face-to-face) with online experiences in order to produce effective, efficient, and flexible

learning." (Stein & Graham, 2014: p.12) Although this definition is very operational in terms of learning, the concept of blended learning in this study comprises balancing two more dimensions that distinguish the concept from 'technology rich instruction' and 'distance learning'. Blended learning is not only 1) balancing online and onsite learning, but 2) balancing cognitive and social learning, and 3) teacher-led and student-led learning as well.

Firstly, according to the definition, blended learning is often identified just by observing both – online and onsite – modes of learning. However, the idea of construction versus instruction supports introducing ICT in schooling by offering to "…learners the possibility of constructing their own meaning based on their own interests and experiences…". (Derry, 2009: p.145) The idea of blending learning includes both cognitive and social learning, because "…meaning is a product of a social process…" (Derry, 2009: p.148), and learning that is based on investigation, discussion and knowledge construction is contributed by technology supported personalization. The application of technology without adequate attention to the knowledge domain and simply introducing technology into classroom without changing the approach to learning is senseless: "…the exposure of learners to rich information is insufficient by itself…" (Derry, 2009: p. 153) and "…new technology-enhanced learning environments do not, however, automatically become instruments in teachers' and students' joint activities; as mentioned above, transformation of their social practices is also called for…". (Hakkarainen, 2009: p. 221)

Community of practice is a concept that offers a useful perspective for exploring the idea of blended learning, because it is not linked to any place or formal structure. Having three dimensions – domain, practice and community – it is defined "by people's potential to learn together" (Wenger et al, 2009: p. 11). Interplay of ICT and community in 'digital habitats' unfolds the social potential of blended learning, because collaborative learning with real people is the most crucial aspect in this process. Virtualization does not kill the school as a physical place – this is an opportunity to extend schooling space with new possibilities: multi-modal socialization for learning, personalization, reflection, knowledge construction, etc. "Technology extends and reframes how communities organize and express boundaries and relationships, which changes the dynamics of participation, peripherality, and legitimacy." (Wenger et al., 2009: p. 11) Teacher's challenge to be accepted in the learning community of their students, to create and recreate learning habitats for partnering – requires not only pedagogical and technological mastery, but systematic and structured understanding of how are students' learning progressing in terms of participation in community of practice.

Secondly, as blended learning is focused on active student participation in designing their learning, the balance between student-led and teacher-led learning

requires redefining a teacher's role in education. A partnering pedagogy coined by Marc Prensky is used for exploring the concept of blended learning in this study. In the partnering pedagogy, a teacher has to coach and guide students to use technology for effective learning. "In the 21st century, we can no longer succeed by doing things to our students; we have to do everything with them." (Prensky, 2009: p. 189) When researching what today's students want from school, Prensky identified a set of expectations: not to be lectured, but to be respected and trusted; to follow own interests and passions, to create, using the tools of their time; to work, to cooperate and to compete with their peers and share their opinions (in class and around the world); and to learn in real settings. (Prensky, 2010)

Finally, both community of practice and partnering as important aspects of the concept of blended learning lead us to rethink our perceptions about schooling from schools to learning environments, "… to think otherwise about pedagogy – beyond the current ideas on instruction in learning environments." (Simons & Masschelein, 2009: p. 313) Foucault's concept of disciplinary practices (Foucault, 1975) as the main principle for organizing learning is still prevailing at schooling. Space and time in educational contexts are used for controlling students and purposeful organizing their learning according to standard. This reduces the student's own active involvement in learning design.

Referring to Prensky's concluding note "what our students need to learn for the future is, to an enormous degree, different than we are teaching now", (Prensky, 2009: p. 186) and, experiencing significant changes in national standards of general education in Latvia (www.skola2030.lv), the curriculum at schools is going to be changed, but the processes – organization of both learning time and space – are under reconsideration. The processes require redesign of teaching practices, supposed to be recreated rather by particular schools than in regulative way; therefore, practicing blended learning for finding effective way for organization of learning time and space is useful exercise and task for every school nowadays. Socialisation remains the one of the most important argument for keeping student learning in real school settings, and the concept of blended learning in this study acknowledges the significance of real learning space; nevertheless, it is focussed on balancing face-to-face and online learning.

The concept of blended learning used in this study is coherent also with that defined by Michael B. Horn and Heather Staker who narrowed the concept, focussing only on formal education, and distinguished as important "…some element of student control over time, place, path and/or pace", learning "…at least in part in a supervised brick-and-mortar location away from home…", and modalities, that "…provide an integrated learning experience". (Horn & Staker, 2015).

Blended approach is likely to emerge as the predominant model of instruction and become far more common than either conventional, purely face-to-face classroom instruction or instruction done entirely online, and is expected to be an enhancement of face-to-face instruction. The overall finding of the meta-analysis is that blended learning on average produces significantly stronger student learning outcomes than learning solely through face-to-face instruction, indicating that the addition of synchronous communication with peers is not a significant moderator of online learning effectiveness. Besides, studies of blended instruction found that purely online learning has been equivalent to face-to-face instruction in effectiveness, and blended approaches have been more effective than instruction offered entirely in face-to-face mode. Findings do not support simply putting an existing course online, but they do support redesigning instruction to incorporate additional learning opportunities online while retaining elements of face-to-face instruction. Meta-analysis shows that these findings are related to both younger and older learners and one of the reasons for using blended learning approaches is to increase the amount of time that students spend engaging with the instructional materials. (Means et al., 2013)

Research also suggests that in blended learning "…student achievement increases as a result of increased engagement, personalization and more effective use of data." (Tucker et al., 2017).

The study uses only the part of blended learning models described in most popular classifications (Rotation, Flex, A La Carte, Enriched virtual models). (Horn & Staker, 2015) It is focussed on learning models that contribute schooling in real school settings and is organized according to commonly accepted forms and norms of general education in Latvia. Therefore, three types of rotation model – Station Rotation, Lab Rotation and Flipped Classroom – are provided for adopting, they are elaborated and used in schools during the introducing blended learning.

Current Situation Related to Blended Learning in Latvia

National Standards of Basic and Secondary education (MK, 2013, 2014), "Guidelines for the Development of Education for 2014-2020" and currently developing competence based education Standard, that are aiming to reconstruct all system of general education in Latvia, are used for the overview of ICT in formal education in this study, and the concept of blended learning is not mentioned in regulative documents of education in Latvia.

However, the main strategy document "Sustainable development strategy of Latvia until 2030" (Latvia, 2030, 2010) defines the benefits of virtualization of the education process and a supporting action plan. The document suggests that by using the benefits of decentralization offered by the use of technology, it is

possible to offer an exciting and interactive curriculum of good quality in the digital environment. This would ensure the differentiation of student needs and introduce new forms of education - for example part of lessons to be held on-site and part in a virtual environment, utilising Internet resources, and online communication with other schools or countries. The document provides 3 aims in the context of virtualization of the education process: 1) To develop an e-lesson concept in order to implement distance learning programmes alongside the traditional model; 2) To virtualize all text-books to be available in virtual environment (until 2020); 3) The digitalization of Latvian schools and libraries will be necessary to implement modern education processes including the use of ICT.

National Standards of primary and secondary education (MK, 2013, 2014) determine compulsory and optional education content in 4 profiles: language; science and technologies; social sciences and humanities; and arts. Computer Science is one of the subjects in the profile of "science and technologies". It is compulsory subject taught from the 5th till the 7th school year of primary education (and it is 1.2 % out of the total amount of lessons in primary curriculum) as well as in secondary education (3 % out of total amount of lessons of secondary curriculum). Programming is an optional course in the secondary curriculum, which could be chosen at the same amount as Computer Science (3 % out of the total amount of lessons). The National Standards of basic and secondary education provide the indicators for the Computer Science (concepts, practical skills, responsible use of ICT, ecology of the use of ICT, etc.), as well as detailed description of skills that students are expected to acquire (for instance, 80 indicators in primary curriculum). The use of ICT in basic education standard is mentioned in: 1) the general description as one of the main goals for the area of science and technologies: "to foster the basics of research work by observing phenomena and processes of nature, by using maths models and ICT; and 2) describing the aspect of learning and practice as "… a skill of using modern technologies". (MK, 2014)

Nevertheless, only a few (4 out of 19) other subject descriptions for primary education contains indications for the necessity of the use of ICT: physics and chemistry ("…students use contemporary technologies for obtaining knowledge"), geography ("…students realize national traditions and ethnographic peculiarities of Latvian regions, and are able to describe them using different information technologies"), and craft ("…students are familiar with the ways of gathering information, including the use of ICT…").

Similar conclusions apply for the standard of secondary education – one of the main goals mentioned in the general description is "…to improve the modern ICT usage skills". (MK, 2013) The use of ICT is mentioned in: 1) Foreign language standard ("…students use latest ICT" and "…students use contemporary

tools of ICT for solving communicative tasks…"); 2) Mathematics ("…use ICT for gathering, structuring, transformation of information and calculation…" and "…use ICT for gathering and presentation of information"; 3) Sciences (including Physics, Chemistry, Biology: "…use ICT for visualisation of processes and obtaining data" and "…use ICT for testing hypothesis and functional relations"); 4) Philosophy ("…understand contemporary philosophical problems related to the ICT").

The analysis of the documents leads to conclusion that students have to learn the necessary technical skills how to use ICT but not skills to use ICT within the learning process.

The only place, where the use of online studies is indicated in Standards, is in the Distance learning program (secondary curriculum). However, the online environment is mainly proposed for exchange of information, but not studying. So, Standards determine skills that students are supposed to acquire in the lessons of Computer Science, but this document says nothing about the indicators for use of ICT in organizing teaching-learning process.

The administration of the education system in Latvia is digitalized (for instance, www.viis.lv, as well as 2 kinds of learning management systems), and often teachers' responses about the use of ICT are related to the use of digital administration tools. However, the online learning environment is not used to consider the teaching/learning process that involves students' active participation.

Although there are several private initiatives (LATSTE, Microsoft, Samsung) for fostering the study and use of ICT they affect rather particular schools and teachers, involved in projects, rather than forming a systemic input. There are several blended learning practices (or rather practices that use the elements of blended learning) developed by individual teachers and applied in general education in Latvia, as well as some municipality level activities that support teachers and schools to introduce blended learning, for instance, the Department of Education of Riga Municipality has provided the study environment, based on MOODLE, and it is available at schools in Riga. The core courses for class 7-12 in science studies and mathematics are developed in this e-learning platform and is open for teachers both for use in the study process as well as for modifying and supplementing them with their own materials. Regardless of wide accessibility, this opportunity is used only by some teachers. This site does not provide the opportunity for development of school e-learning profile, therefore schools do not have any motivation in systemic solutions for the redesign whole curriculum by using these tools. This resource supports individual teachers, not the school in general.

A small survey conducted in 15 schools of Latvia about blended learning in 2015 (27 teachers and 17 members of school leadership teams) showed that more than a half of them are not familiar with the meaning of the blended learning.

Almost all of respondents reported that they don't know any formal training programme for blended learning, and only distance learning and 'evening classes' were mentioned as using blended learning in general education. The survey and the training that was organized during the project "Curriculum design for blended learning" demonstrate gaps in education related to blended learning in Latvia: there is 1) no clear understanding what blended learning is; 2) lack of systemic use of blended learning models; 3) teachers lack skills and experience how to implement blended learning components in everyday work, as well as resources and training.

Introducing Blended Learning in Schools

For introducing blended learning in schools, professional development program (PDP) was implemented during the project "Curriculum design for blended learning", by involving 20 schools in Europe (6 project partners from Latvia, Cyprus, Austria, and UK). This study reports PDP implementation in 5 schools in Latvia from different regions and cities. The aim of PDP was to introduce school leadership teams (4-5 leaders and teachers from each school) to the concept and benefits of blended learning and to support introducing blended learning in schools by providing helpful tools and methodologies: self-diagnostics, learning materials, templates for modelling, management strategies, quality indicators, etc. PDP, implemented in blended way, was organized around 7 units:

1 – Introduction: Introduce school to concept/benefits of BL. School makes an initial diagnostic and formulates a first draft of a vision for blended learning in their context.

2 – Models of Blended Learning: Models of blended learning are shared and discussed; allowing the school to make an assessment on what types of blended learning models are possible in school.

3 – Designing Blended Learning: The unit provides a guide to planning a unit of work using blended learning.

4 – Management of Blended Learning: Schools revisit the vision based on deeper understanding of blended learning and plan the (change) management strategy.

5 – Setting up Blended Learning: School chooses and sets up technological infrastructure; and develops the curriculum with blended learning.

6 – Delivering Blended Learning: The unit focuses on supporting school teams support the implementation of the Toolkit.

7 – Monitoring Blended Learning: Key indicators are identified for assessing implementation of blended learning and tools created to measure them.

Schools in Latvia that participated in the PDP were motivated to introduce blended learning, for instance: "We are looking for introducing blended learning to improve quality of teaching and learning. Results of national exams demonstrate gaps, which have to be overcome, and new, technology enriched, approaches are necessary for meeting needs of students with different aims, intentions and abilities." (School No. 1, deputy head); "We hope that blended learning not only will help our students to better acquire knowledge, but also will widen their horizon and understanding of real life." (School No. 2, headteacher); "Blended learning provides the opportunity of personalized learning for students, according their abilities, interests and learning needs." (School No. 3, headteacher).

Readiness for Blended Learning: leadership, teachers, students, community

Key factors that are considered when assessing the readiness for blended learning displayed in literature are: school culture, staff proficiency, current instructional program and technology infrastructure. (Tucker et al., 2017) Self-diagnostic tool (further – SDT) as a part of the Toolkit was developed during the project "Curriculum design for blended learning" in 3 dimensions – systems, processes and people, and 10 categories: school vision and goals; culture of innovation; technical capacity; community support; 21-st century learning skills in curriculum; existing approaches and particular practices; designing 21st century learning; ICT skills for teaching and learning; motivation for blended learning; professional development routines. For each of the dimensions and categories the set of questions reveals important aspects of school readiness for blended learning, both from teacher and leadership perspective, and they initially were organized in two questionnaires – for teachers (expecting that all the teachers will be engaged in the diagnostics) and for leadership team to focus on the particular aspects relevant for introducing blended learning at schools. The overview of answers from teachers and leadership provide the data for analysis of strengths and weaknesses of a school to create a vision for blended learning. There are no any strong criteria against which capacity of a school could be evaluated, because it depends on various contextual and conceptual issues; therefore, results that come out of the questionnaires (acceptable reliability, $\alpha = 0.877$, $n_{teachers}=112$; and $n_{leaders}=16$) are rather illustrative for a school and helpful for designing the vision and taking decisions about the opportunities for blended learning in school than evaluative or prescriptive. They could be visualized and merged in categories and analysed separately. School teams use SDT to assess the readiness of school to deliver blended learning using the self-diagnostic (systems, processes, people) and to use data from SDT to create the draft version of school vision related to blended learning (it should be considered also whether to do this questionnaire

anonymously or not; anonymous results tend to be more accurate and truthful overall, but they do not help with discerning competences or weaknesses for each person individually).

After the PDP piloting both questionnaires (for teachers and leaders) were merged, because the differences between teachers' and leaders' views turned out to be of little value in the context of particular school, and the SDT for assessing the readiness of a school for blended learning is revised ($\alpha = 0,909$) and reused for revealing progress related to introducing blended learning in schools.

SDT is a useful tool for particular school, not for the generalized conclusions; nevertheless, there are some appointments that come out of analysis of the results – there is no significant difference 1) when comparing teachers' motivation for blended learning before and after the pilot; 2) and between motivation for blended learning reflected by teachers for them and for their students. It can be concluded that teachers acknowledge and accept the need for changes, and their overall reasoning has not changed significantly in one year time.

When introducing blended learning in a school, students become active participants of the teaching learning process; therefore, they responses demonstrate readiness of a school for blended learning as well. Questionnaire for students (n=103, $\alpha = 0.799$) was developed (using a part of the same categories as for teachers) and used in parallel with the questionnaire for teachers (n=28) in one of the pilot schools, which is going to implement blended learning on regular bases.

Results demonstrate that: 1) there are significant differences ($p<0.01$) between student and teacher groups related to motivation for blended learning – more teachers than students (mean difference 0.49) acknowledges importance of blended learning; however, there are no differences between groups of teachers from different schools both in their motivation and acknowledgement of importance of blended learning for their students; 2) motivation of students for blended learning positively correlates ($p<0.01$) with some of ICT skills (related to the use of open education resources), online assessment practices and awareness of availability of support to develop ICT skills in school, as well as ($p<0.05$) with an acknowledgement of appropriateness of school facilities for blended learning; 3) there is no difference between age groups of students (among 12 to 18 years old students) in their readiness for blended learning. The difference of motivation between teachers and students for blended learning can be interpreted by accepting that teachers are aware of why it is needed; at the same time students, who are low motivated for learning in general, perceive blended learning as extra work.

Leadership Challenges for Setting up Blended Learning in Schools

For analysis of leadership challenges for setting up blended learning in schools, interviews with leaders of pilot schools are organized nine months after the PDP, SDT is repeated in 3 (of 5) schools and SDT for students is adapted and applied in one of the pilot schools. The challenges are different; for instance, the main challenge for School A, which started introducing blended learning with purposefully organized teacher professional development program, is organizing the infrastructure, because when introducing blended learning, the number of users grows and the main problem is the technical ability to provide a high-quality Internet. Another school B (with good technical capacity and skilled teachers) tries to go a step further, and their biggest challenge is the resistance of students and parents to restructuring the teaching process, because as long as the blended learning is used according to the traditional routines of the learning processes at school, there is no resistance from students and parents, but when routines are under reconsideration, there is a lot of arguments against changes, and this is expected, because if to refer to the literature: "…it is easy to engage in activities that are in accordance with the habitus, but very difficult to do anything that substantially diverges from it" (Hakkarainen, 2009: p. 222). Table 1 provides the framework of leadership challenges related to the phase of implementation of blended learning discovered during the introducing blended learning in schools.

Table 1 **Leadership challenges related to the phase of implementation of blended learning**

No	Phase of implementation	Focus on	The main leadership	
			tasks	challenges
1	Lack of knowledge, ICT, skills and experience related to BL	skills and technologies	To provide teacher professional development To find resources for technologies and infrastructure for use of ICT	Resistance from teachers Financial/resource problems
2	Particular, fragmented BL practices, increasing understanding of BL	processes	To restructure teachers' workload to provide more opportunities for sharing experiences and time for developing BL courses	Teachers do not have enough time for preparing BL courses because of lack of experience and materials (overwork)

3	Increasing use of BL, but organized in traditional classroom management system	infrastructure, methodology	To strengthen technical capacity To develop coherent methodology for applying BL in school according to learning objectives	Increasing number of ICT users and intensity of use of internet challenge infrastructure for use of ICT – raising technical problems
4	Emerging forms of BL that requires remodelling of curriculum and abandonment of traditional forms of study process	system, community, management	Community involvement – to explain and discuss, to provide arguments, to demonstrate capacity of a school	Resistance from students and parents Balancing workload for students, management

By researching uplifting leadership in 15 organizations which improved their performance, Hargreaves, Boyle and Harris identified six interrelated factors that are crucial: dreaming with determination, creativity and counter-flow, collaboration with competition, pushing and pulling, measuring with meaning and sustainable success. (Hargreaves et al., 2014) This perspective demonstrates how effective leaders transform their practices, and inspires to take meaningful actions to overcome the challenges in particular contexts. Nevertheless, research demonstrates that the closer educational leaders get to the core business of teaching and learning, the more likely they are to have a positive impact on students' outcomes. (Robinson et al., 2008) To sum up in conclusion – management, leadership and pedagogy are closely and inseparably linked in the process of introducing blended learning at school.

Discussion

Introducing blended learning at schools could be considered both as emerging individual practices of particular teachers and as institutional transformations involving social, operational and technological implications.

In general, teachers acknowledge the importance of blended learning, and their motivation is rather high in spite of lack of differentiated teaching-learning materials that is meant as one of the most important problems in Latvia. This requires investing time and work in developing blended learning courses. When benefits are not obvious and immediate for teachers and students, when students have to work harder and to take more responsibility for their learning, when there are no clear models how to develop practices, when technologies sometimes fail, when the most advanced teachers are overloaded (and demonstrate very good results in traditional teaching), the confusion and resistance against initiatives related to introducing blended learning are understandable. Besides, teachers in

Latvia are mostly paid accordingly to their contact lessons, not accordingly to number of courses and materials developed or number of students engaged in independent and responsible learning, and although the teacher salary rules allow more autonomy for applying school policies than before, it is still the question of resources hindering decisive choices. Problematics related to introducing blended learning in schools is coherent with problems of introducing a new national competence based curriculum/standard in schools, it is related to ability and desire of teachers to look at the subject or course as a whole and to see how to design 21st century learning that fits to the future needs of our students.

There is still a gap between understanding the benefits of blended learning and doing. Teachers are accustomed to keep their students dependent on their teaching, dependent on provided information by requiring their presence rather than learning, and by demonstrating that learning takes place onsite, in a supervised environment (for instance, by sitting in a classroom and reading a book because students may not read this book without supervision). Teachers hardly accept the responsibility of taking decisions that differ from habitual experience, although "…it is an illusion of being responsible about student results, about their learning…" (from an interview with a deputy head of a pilot school). It is why schools are looking how to rearrange the ways how teachers are working together "…by framing our collaboration for learning in blended way to understand what it means for ourselves…" (from an interview with a deputy head of a pilot school).

This is why communities of blended learning practices emerging both within and around schools that are taking the challenges of introducing blended learning, contribute ongoing processes in schools.

Blended learning practices in pilot schools are gradually developing, including teacher continuous development courses, collaboration, time management changes, facilitation of particular practices, emphasizing benefits and adjusting blended learning to regulations.

References

Derry, J. (2009). Technology Enhanced Learning: A Question of Knowledge. In: Cigman, R. & Davis, A. (eds.) *New Philosophies fo Learning* (pp. 142-155). Willey-Blackwell, Malden-Oxford.

Foucault, M. (1975). *Discipline and Punish: the Birth of the Prison*. New York: Random House.

Guidelines for the Development of Education for 2014-2020. Retrieved from: https://rio.jrc.ec.europa.eu/en/library/guidelines-development-education-2014-2020

Hakkarainen, K. (2009). A knowledge-practice perspective on technology mediated learning. *International Journal of Computer Supported Collaborative Learning*, *4*, 213–231.

Hargreaves, A., Boyle, A., & Harris, A. (2014). *Uplifting Leadership: how organizations, teams and communities raise performance*. San Francisco, CA: Jossey-Bass.

Horn, M. B., & Staker, H. (2015). Blended: *Using Disruptive Innovation to Improve Schools*. San Francisco: Jossey-Bass.

Means, B., Toyama, Y., Murphy, R., & Baki, M. (2013). The Effectiveness of Online and Blended Learning: A Meta-Analysis of the Empirical literature. *Teachers College Record*, 115.

Ministru kabineta noteikumi (MK) [Regulations of Cabinet of Ministers] (2013, 2014). Retreived from https://likumi.lv/doc.php?id=257229; https://likumi.lv/doc.php?id=268342#piel24&pd=1

Murgatroid, S. (2016). Renaissance Leadership and the Future of Schooling. In: Hurley, T. & O'Connor, E. (eds.) *Leadership for Future Focused Education and Learning for All* (pp. 7-34). Drumcora Education Centre.

Prensky, M. (2010). *Teaching Digital Natives: partnering for real learning*. Thousand Oaks, CA: Corwin.

Robinson, V., Lloyd, C., & Rowe, K. (2008). The Impact of Leadership on Student Outcomes. *Education Administration Quarterly*, *44/5*, 635-674.

Rubene, Z. (2017) Skolēna digitālais IQ. Samsung Skola nākotnei. Retrieved from https://old.drossinternets.lv/upload/materiali/petijumi/skolenadigitalaisiq_petijuma_prez entacija.pdf

Simons, M., & Masscheilen, J. (2009). From Schools to Learning Environments: The dark Side of Being Exceptional. In: Cigman, R. & Davis, A. (eds.) *New Philosophies fo Learning* (pp. 311-327). Willey-Blackwell, Malden-Oxford.

Stein, J., & Graham, C. R. (2014). *Essentials for Blended Learning: A Standards-Based Guide*. New York and London: Routledge.

Sustainable development strategy of Latvia until 2030 (Latvia 2030) (2010). SAEIMA of the Republic of Latvia. Retrieved from: https://www.cbs.nl/NR/rdonlyres/B7A5865F-0D1B-42AE-A838-FBA4CA31674D/0/Latvia_2010.pdf

Tucker, C. R., Wycoff, T., & Green, J. T. (2017). Blended Learning in Action: A Practical Guide Toward Sustainable Change. London: Corwin.

UNESCO (2011). *Transforming Education: The Power of ICT Policies.* Retrieved from: http://unesdoc.unesco.org/images/0021/002118/211842e.pdf

Valsts izglītības satura centrs (VISC)

Wenger, E., White, N., & Smith, J. D. (2009). *Digital Habitats: stewarding technology for communities. Portland*, OR: CPsquare.