



Blended learning in school education – guidelines for the start of the academic year 2020/21

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FOREWORD

At this stage of the COVID-19 crisis, countries are reopening schools but the health challenges persist and restrictions may remain in place, impacting on the organisation of school education at the start of the next academic year. School communities will return after the vacation under new circumstances that require forward-planning and ongoing flexibility. One approach under discussion is **blended learning - a combination of in-school and distance learning**.

The interruption of in-school teaching during the crisis has revealed the possibilities and challenges of distance learning. It has also highlighted the crucial role of schools as communities with a sense of belonging and safety; a place to develop social relationships; and a source of support from teachers and peers. Experiences of Emergency Remote Teaching across Europe and the world in spring 2020, and a subsequent dual functioning of schools where there has been partial re-opening¹, can inform schools and systems on a more structured combination of in-school and distance learning. Nevertheless, all of this is still some way from the coherent yet flexible approach that blended learning is designed to be.

Rather than returning fully to the way school education was designed and functioning before, the crisis has also presented systems with an opportunity to positively embrace a paradigm shift that has long been happening, albeit slowly. Education researchers, practitioners and policy makers have been exploring how the “traditional” ways of organising teaching and learning can be adapted; how to move away from subject-based knowledge transfer to scaffolded competence development; and how to support teachers and schools to be innovative in terms of their own organisation and pedagogical methods, for the benefit of all learners.

The purpose of these guidelines is to be a practical reference to:

- explore the pedagogical opportunities and challenges of a blended learning model and to identify key considerations that can help with reflection and strategic planning;
- specifically support planning for the start of the next academic year; however, they may also inspire lasting positive change for inclusive and innovative school education;
- guide policy makers in considering the system as a whole, but will also be useful to regional and local authorities, school leaders, and other stakeholders in their own contexts;
- complement existing guidelines by national authorities and international organisations² on school reopening and on distance learning, and support new national guidelines that will enable all learners to benefit from combining in-school and distance learning;
- a broad perspective by considering: school leadership; legislation to support decision-making; the management of in-school and distance learning environments for all learners; the teacher’s role, competences, and working conditions; learner assessment; the well-being of staff and pupils; collaboration and school community; and quality assurance.

¹ Some countries have allowed a small number of face-to-face activities when these cannot be done through distance learning (e.g. practical exams and training, students with special needs who require personal contact, preparations for final exams). In some countries, attending in-school lessons has been the family’s choice. There are also examples of teachers managing the in-school teaching only and others facilitating the distance teaching, following specific guidelines. Various rotation systems for year groups, adapted timetables and safety measures have been set up in the Member States who decided to partly re-open schools, according to the governments’ guidelines for health and safety.

² Such as [guidelines in Croatia](#) and the [OECD’s framework to guide an education response to the COVID-19 Pandemic of 2020](#) or [UNESCO’s Framework for reopening schools](#).

PART ONE

1.1 What is “blended learning”?

In these guidelines, **blended learning is understood as a hybrid approach that combines learning in school with distance learning**, including online learning.^{3 4 5 6 7 8 9}

Blended learning is a flexible model that can support a project or course of study to progress whilst not requiring teachers and learners to be in the same physical space at all times. On a practical level, this is useful for times when attending a school site is not possible, or when other sites are more appropriate for the learning approach. It demands a careful consideration of pedagogical approach by requiring decisions to be made about how and when to best use the different environments for independent study, collaborative enquiry, social interaction, and practical application. It encourages a review of what the school site is and can be for the learner and its community, and how in-school time is best utilised. It also prompts a review of national and school curricula as the expectations set down for learner competences affect the design of pedagogical approach, including assessment.¹⁰

Well-organised blended learning can have a number of benefits. It incorporates the idea that students are no longer merely passive receivers of information and the teacher is not the only facilitator. A blend of in-school and distance learning instead, teachers support students can help to individualise learning; increase learners’ autonomy, motivation and agency; improve learning skills towards becoming self-directed learners. Where relevant tools are used, it can also support the development of digital competence¹¹. The in-school periods can enhance learners’ social skills, well-being and sense of community, as well as offer more personalised support for learning by teachers. Blended learning is a way to move towards a competency-based approach where the learner is in the centre¹². For teachers, blended learning allows for valuing all learners, differentiating and personalising teaching. The ability to support learners with specific needs through blended learning was already evident before the COVID-19 crisis¹³.

³ Hall, H., & Davison, B. (2007). Social software as support in hybrid learning environments: The value of the blog as a tool for reflective learning and peer support. *Library & Information Science Research*, 29(2), 163–187.

⁴ See <https://blearning-project.eu/index.php/news/18-transnational-needs-analysis-report>

⁵ Hrastinski, S. What Do We Mean by Blended Learning?. *TechTrends* 63, 564–569 (2019). <https://doi.org/10.1007/s11528-019-00375-5>

⁶ Friesen, N., (2012) Report: Defining Blended Learning. Available at https://www.normfriesen.info/papers/Defining_Blended_Learning_NF.pdf

⁷ Bryan, A., Volchenkova, K.N. (2008). Blended Learning: Definitions, Models, Implications for Higher Education. Available at https://www.researchgate.net/publication/303815166_BLENDED_LEARNING_DEFINITION_MODELS_IMPLICATIONS_FOR_HIGHER_EDUCATION/link/5b7e368992851c1e1229270c/download (accessed: 3.06.2020)

⁸ Olapiriyakul, K., & Scher, J. M. (2006). A guide to establishing hybrid learning courses: Employing information technology to create a new learning experience, and a case study. *The Internet and Higher Education*, 9(4), 287–301.

⁹ Hrastinski, S. What Do We Mean by Blended Learning?. *TechTrends* 63, 564–569 (2019). <https://doi.org/10.1007/s11528-019-00375-5>

¹⁰ This paradigm shift is explored in detail by Fullan, M., Quinn, J., Drummy, M., Gardner, M. (2020), “Education Reimagined: The Future of Learning”. A collaborative position paper between NewPedagogies for Deep Learning and Microsoft Education. <http://aka.ms/HybridLearningPaper>

¹¹ As set out in the 2018 Recommendation on Key Competences for Lifelong Learning https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.C_.2018.189.01.0001.01.ENG&toc=OJ:C:2018:189:TOC

¹² iNACOL Blended Learning Teacher Competency Framework <https://files.eric.ed.gov/fulltext/ED561318.pdf>

¹³ See Hughes, G. (2007) Using blended learning to increase learner support and improve retention. Accessed at <https://discovery.ucl.ac.uk/id/eprint/10002022/1/Hughes2007Using351.pdf>

Blended learning has been mostly used in tertiary education and business training, as well as some schools in remote areas¹⁴. However, it can also be effectively implemented in mainstream school education if a number of factors are taken into consideration.¹⁵ What is important is that decisions are based on what is best for the learner; that there is clear understanding of and rationale for the embedding of blended learning as a pedagogical approach; and that actions are carefully planned, created and monitored with feedback.¹⁶

Whilst the crisis has prompted distance learning (commonly understood as “Emergency Remote Teaching”) to be embraced, coupled more recently with some limited in-school activity, a positive and fully developed approach to effective blended learning in school education has been hindered by certain concerns and challenges:

- that learning at a distance may be suitable for older students and adults, where learners have more control over time, place, path, and/or pace¹⁷, however, younger **pupils** and those needing additional learning support may struggle to learn independently;
- that combining effective face-to-face teaching and facilitating the flexible distance learning¹⁸ of all pupils in a way that functions as a coherent pedagogical approach¹⁹ requires an high level of competence and innovation by **teachers and school leaders**;
- that effective blended learning, even in individual institutions, requires a flexibility or significant fundamental change across the education **system** and its support mechanisms (legislation and frameworks, resources, professional development, quality assurance).

Whilst these challenges need to be taken seriously, the crisis has proven that change and flexibility are both possible and desirable, which is what these guidelines are intended to support as a common frame of reference.

Blended learning is not merely combining virtual plus shared physical space learning; it is a teaching and learning process integrating various factors: learning environments (home, online, school, workplace, other), competence development process (lifelong learning and professional); affective domain (motivation, satisfaction, discouragement, frustration), and people (learners, teachers, parents, other staff).²⁰ For this reason, it is important to consider blended learning within the ongoing development of the whole school and all of its associated stakeholders. The concept of “**schools as learning organisations**” is another useful frame of reference that can help schools and systems plan for and manage innovation and change.

Also : Rivera, J.H., (2016) The Blended Learning Environment: A Viable Alternative for Special Needs Students, *Journal of Education and Training Studies* Vol. 5, No. 2; February 2017 Published by Redfame Publishing URL: <http://jets.redfame.com>. Accessed at : <https://files.eric.ed.gov/fulltext/EJ1125804.pdf>

Also : UNESCO (2016). Learning for All: guidelines on the inclusion of learners with disabilities in open and distance learning. Paris: UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000244355>

¹⁴ Bacsich, Paul. (2012). Virtual schools and colleges providing alternatives for successful learning volume 1. Available at https://www.researchgate.net/publication/339537812_VIRTUAL_SCHOOLS_AND_COLLEGES_PROVIDING_ALTERNATIVES_F_OR_SUCCESSFUL_LEARNING_VOLUME_1

¹⁵ Review on Blended Learning: Identifying the Key Themes and Categories: <http://www.ijiet.org/vol7/952-ER0019.pdf>.

¹⁶ Expressed by the Distance Learning Network: School education in its discussion on Blended Learning, 10 June 2020

¹⁷ Staker H., Horn M.B. Classifying K-12 Blended Learning. Available at: <https://www.christenseninstitute.org/wp-content/uploads/2013/04/Classifying-K-12-blended-learning.pdf> (accessed 03.06.2020).

¹⁸ Stein, J., & Graham, C. R. (2014). *Essentials for blended learning: a standards-based guide*. New York: Routledge.

¹⁹ Krasnova T. A Paradigm Shift: Blended Learning Integration in Russian Higher Education. *Procedia – Social and Behavioral Sciences*, 2015, no. 166, pp. 399–403. Available at: <https://www.sciencedirect.com/science/article/pii/S1877042814066816>

²⁰ Yu, Zhonggen. (2015). Blended Learning Over Two Decades. *International Journal of Information and Communication Technology Education*. 11. 1-19. 10.4018/IJICTE.2015070101.

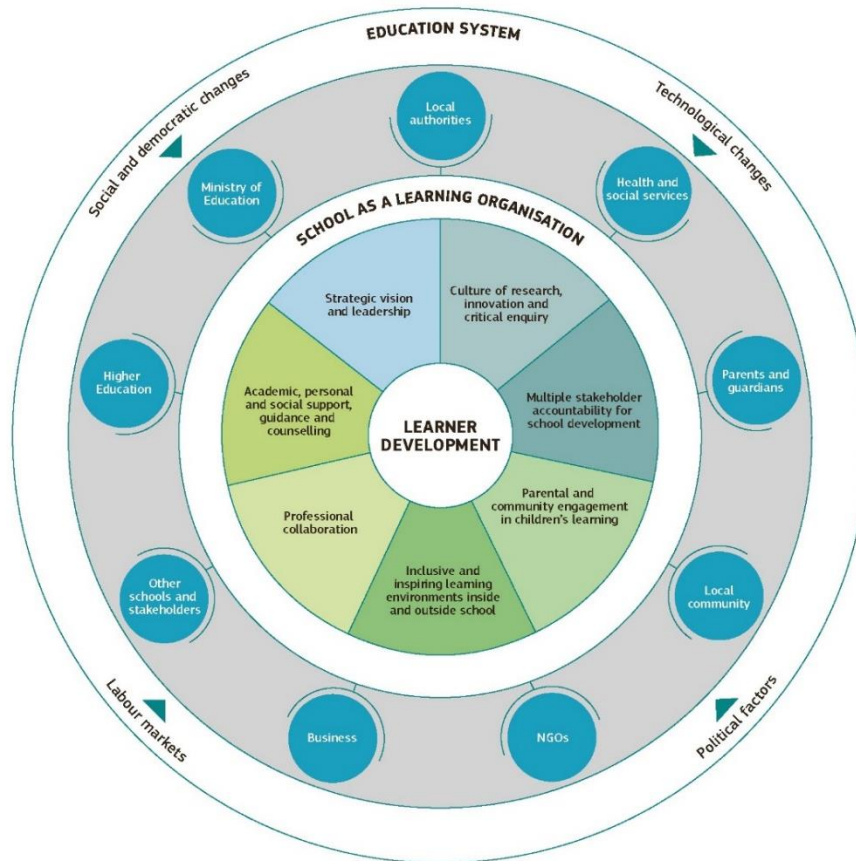


FIGURE 1: School as learning organisation, developed by the ET2020 Working Group Schools²¹

A practical blended approach: the ratio and complementarity of in-school and distance learning

Research on blended learning has explored instructional design, teacher and pupil interaction, learning outcomes, attitudes, and the use of technology.²² Most of the literature is based in tertiary education and adult learning and focusing on online learning rather than distance learning in a broader sense. These guidelines are based on a sample of the existing literature, but evidence specifically from school education is emerging and is likely to expand as systems enter the new academic year, which will be invaluable to the field.

There is no clear evidence on “how much” of any particular learning environment is beneficial, and the complexity of the learning process and contexts means that there can be no “one size fits all” ideal. However, based on a review of literature, generally, more deficits may exist in either sole online or classroom education compared with blended learning, which combines both approaches.²³

When designing a blended learning approach for courses of study, the approach selected by a whole school, subject department, or individual class teacher may have a number of different characteristics.²⁴ It will depend on factors such as: the age and the learning competences of students;

²¹ <https://www.schooleducationgateway.eu/en/pub/resources/governance-of-school-edu.htm>

²² See <https://flexible.learning.ubc.ca/research-evidence/research-articles-2/blended-learning/>

²³ Yu, Zhonggen. (2015). Blended Learning Over Two Decades. International Journal of Information and Communication Technology Education. 11. 1-19. 10.4018/IJICTE.2015070101.

²⁴ Staker, H., & Horn, M. B. (2012). *Classifying K-12 blended learning*. Innosight Institute.

the curriculum content and goals; the availability of appropriate infrastructure (computers, connections, places to study) as well as competences of teachers; and the schools' pedagogical culture. The approach will also vary as to the extent of time spent in distance learning and in on-site schooling, depending on the extent of student autonomy and teacher- or other mentor-led activities.

In what is more commonly known as a « flipped classroom », pupils acquire preliminary knowledge at home or remotely (via books, online research, and so on) and teachers use in-school lesson time to facilitate the application of that in practice.²⁵ This approach may be taken whenever appropriate in a course of study and relies on all pupils having adequate opportunity to develop knowledge and skills in both environments.²⁶ The particular feature of “flipped” is that the distance learning happens before the on-site application.

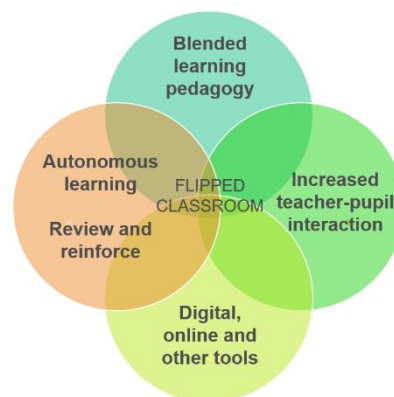


FIGURE 2: Elements of a flipped classroom approach²⁷

Blended learning invites a consideration of a learning process that extends both before and after a structured learning event, or “lesson”. As described above, it encourages the learner to take ownership of the whole process, collaborating with others (teacher, peer, parent, support staff) at different stages. It potentially reduces teacher-pupil knowledge transfer being a dominant feature and establishes the “before” and “after” stages as more meaningful to the learner.

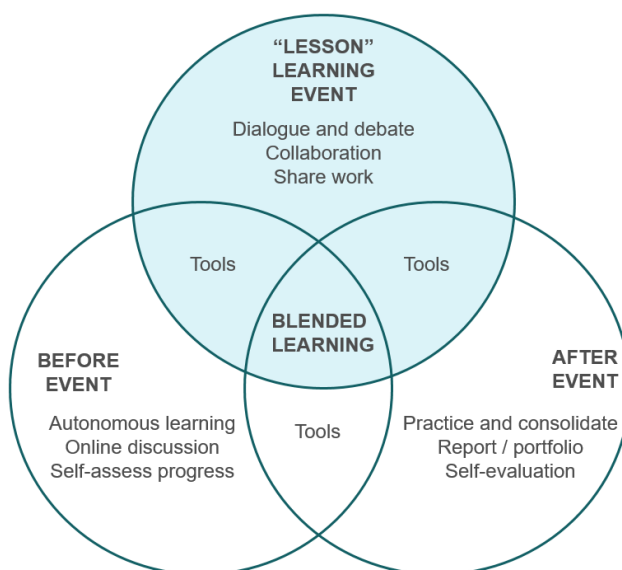


FIGURE 3: Blended learning as a process including before and after learning events²⁸

²⁵ See <https://www.blendedlearning.org/models/#flip>

²⁶ During school closure and partial re-opening, this approach was encouraged by the Belgium ministries of education: using distance learning as “pre-learning” in order to make best use of limited classroom time.

²⁷ Based on original graphic designed by K. Walsh, College of Westchester, NY and Flipped Learning Network. See <http://www.flippedclassroomworkshop.com/> and <https://flippedlearning.org/>

²⁸ Based on Liu et al (2017) Cloud-class Blended Learning Pattern Innovation and Its Applications, *Proceedings of the 2017 International Symposium on Educational Technology, Hong Kong*. Available at

A blended approach may also be described along a spectrum of less-to-more time spent learning at distance compared in in-school.

For learners that are more independent, some time (hours, days, weeks) can be spent learning at distance, where the role of teacher is to provide support, feedback and instruction on a needs basis while students work through course curriculum and content. This gives students a high degree of control over their learning and supports their self-directed and goal oriented learning. This may include taking elective courses provided by other schools, or internships in the workplace, that are of particular interest to the student and can be included in a flexible schedule “a la carte”.

In situations where the majority of learning takes place at distance, pupils may only attend school for required face-to-face learning sessions with a teacher. This does not require daily school attendance and may be useful for: students who, for instance, due to illness cannot attend school every day; when schools due to health concerns cannot have all students in their premises at the same time; or when home is very remote from the school site.

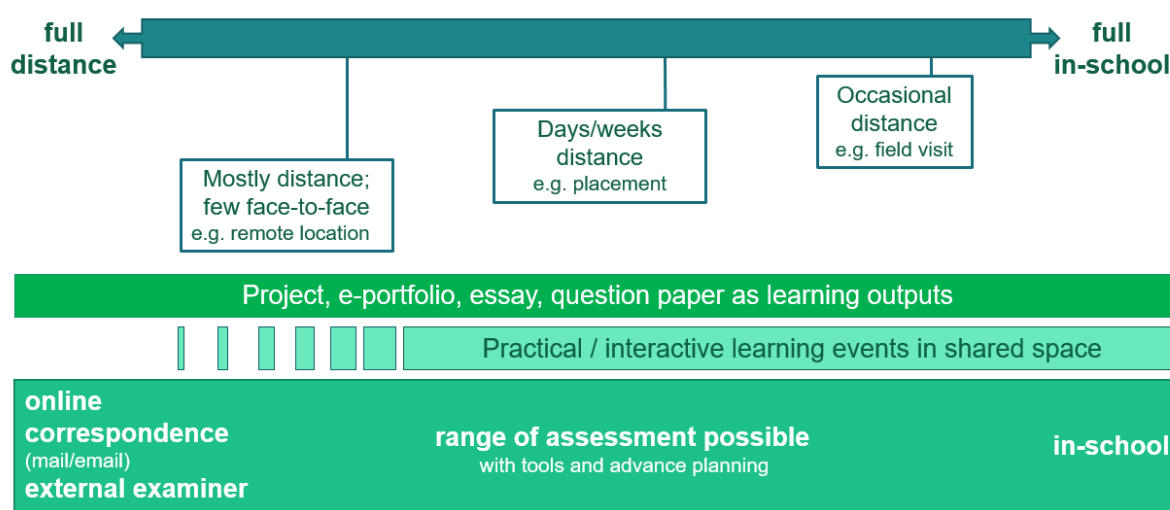


FIGURE 4: Blended learning approach as a spectrum of situations and opportunities

1.2 What are the key considerations for successful blended learning in school education?

SCHOOL LEADERSHIP	• Shared vision • Collaborative school culture • Supporting teacher decision-making • Curriculum objectives	• Capacity to use tools • Targeted support to learners • Wider community support • Liaising with local and national authorities
LEGISLATION TO SUPPORT DECISION-MAKING	• Authorising the use of a blended model • Core provision to all • Evidence base • Guidelines	• Access to professional development • Related legal requirements • Quality assurance processes • Other education levels
MANAGING IN-SCHOOL AND DISTANCE LEARNING ENVIRONMENTS FOR ALL LEARNERS	• School timetable • Access to devices • Digital tools • Support staff	• Parents and guardians • Learner management of environments • VET and work-based learning
TEACHERS – ROLE, COMPETENCES AND WORKING CONDITIONS	• Teaching and learning approach • Mindset • Risk-taking and innovation • Assessment for learning • Supporting pupils as individuals and community	• Reflection and development • Sharing practice • Leadership roles • Wider community • Newly qualified teachers • Working conditions
LEARNER ASSESSMENT	• Transparency • Equity • Self-efficacy • Familiarity	• Regularity • Diversity • Flexibility
WELL-BEING OF STAFF AND PUPILS	• Causes of anxiety and stress • Developing guidance	• Developing competences • In-school dialogue
COLLABORATION AND SCHOOL COMMUNITY	• Maintaining communication • Teacher collaboration • Pupil identity and belonging	• Parents and families • External stakeholders • Use of school site
QUALITY ASSURANCE – EVALUATION AND FEEDBACK	• Teaching and learning outside school • School climate/culture • Managing staff resources	• Monitoring practices and new developments • Other providers

Each area is outlined in further detail below. In each case, the **key considerations** may be usefully turned into practical **guiding questions** for stakeholders, for example: “Does our system have in place...?” or “How can our schools...?”

1.2.1 SCHOOL LEADERSHIP

In implementing blended learning, school leadership²⁹ is key in ensuring that there is a culture and climate for continuous improvement and that school level barriers for blended learning are addressed. It will be the school leadership who define the specific goals of blended learning – in cooperation with teachers – and will have the responsibility of ensuring that professional development needs are examined and addressed³⁰.

This is a challenge compounded by the need for all staff to recover from an intense period of distance learning over the vacation and then rapidly prepare for the forthcoming academic year. Many schools will have gained some experience from the partial re-opening of school sites and this experience can be usefully built upon.

Key considerations for school leadership – not only school leaders but also those who have the capacity and responsibility to support them – include how to³¹:

- i. **Develop a shared vision for the implementation of blended learning:** Schools are generally expected to regularly reflect on their successes and challenges and create a strategic development plan – to act as a “school as learning organisation”.³² As is true for any innovation in school practice, a clear sense of direction from the school head and a shared vision held by the school community is crucial for effective problem solving that will be an ongoing part of adapting to blended learning approaches.³³ Such a vision may require a signification shift in mindset concerning new staff responsibilities, and concerning the increase in leader-centred approaches and learner independence.
- ii. **Transform the vision into action with a collaborative school culture:** Teachers and school leaders have experienced a unique period of discovery and innovation during the shift to distance learning. Sharing this expertise, and that which will be built during the new academic year, will be important to developing effective blended learning approaches that best fit each school community.³⁴

²⁹ **School leader:** Those who hold a formal position of responsibility for the management of the school. School leaders are also teachers, as they are also still involved in learner development, both in and out of the classroom. There needs to be certain career support to reach a leadership role.

School head: The most senior school leadership position - the person with overall responsibility for the pedagogical and administrative management of the school or cluster of schools. This role might also be referred to as ‘head teacher’, ‘school principal’ or ‘school director’. They can also be included in the broad definition of ‘school leader’. See Summary of European Commission (2020) « Supporting teacher and school leader careers : a policy guide » <https://op.europa.eu/en/publication-detail/-/publication/f02d4648-7a07-11ea-b75f-01aa75ed71a1/language-en>

³⁰ iNACOL, The International Association for K–12 Online Learning, *Promising practices in blended and online learning - Blending Learning: The Evolution of Online and Face-to-Face Education from 2008–2015* Evergreen Education Group www.inacol.org, originally published May 2008. Available at : <https://files.eric.ed.gov/fulltext/ED560788.pdf>

³¹ Acree, L., Gibson, T., Mangum, N., Wolf, M.A., Kellogg, S. & Branon, S. (2017). Supporting School Leaders in Blended Learning with Blended Learning. *Journal of Online Learning Research*, 3(2), 105-143. Waynesville, NC USA: Association for the Advancement of Computing in Education (AACE). Retrieved June 5, 2020 from <https://www.learntechlib.org/primary/p/171355/>

³² See European Commission 2018 *Teachers and school leaders in schools as learning organisations : report of the ET2020 Working Group Schools*: https://www.schooleducationgateway.eu/downloads/Governance/2018-wgs4-learning-organisations_en.pdf

³³ See the European Commission 2017 *Study on School Innovation in Europe*: <https://www.schooleducationgateway.eu/en/pub/resources/innovation.htm>

³⁴ Pont, B., Nusche, D., Moorman, H. (2008) *Improving School Leadership volume 1: policy and practice*, OECD

- iii. **Support teachers to make autonomous decisions:** Implementing blended learning will require a considerable amount of immediate decision-making by teachers. Empowering teachers to take that responsibility is best supported when leadership is school in distributed and when leadership is based on trust and where learning environments are flexible. Nevertheless, teachers should also not feel alone or isolated (see chapter on WELL-BEING OF STAFF AND PUPILS).
- iv. **Ensure that all objectives of the curriculum are able to be achieved in combination of on-site and distance learning:** Whether or not a school has a high degree of autonomy over the curriculum, some responsibility will likely lie with the school leadership to ensure that all aspects can be effectively covered. This may involve more fundamental shifts in curriculum structure – for example as modules rather than year-long courses – and in the formulation of learning outcomes - for example on competences rather than subject knowledge.
- v. **Develop teachers’ and school leaders’ capacity for making the optimum use of available tools:** Blended learning will likely require the use of new software, resources, and data systems, and news ways of understanding the learning process. Professional development opportunities will need to be signposted and supported. Internal and external tools and process for determining capacity may be useful, such as structured self-evaluation questionnaires³⁵ or peer dialogue.
- vi. **Provide targeted support to learners with particular needs:** An inclusive blended learning strategy should be designed - and systematically assessed and adjusted - by a multidisciplinary team, with provision for individual tutoring/support to be delivered by the most appropriate actors. Disadvantage is a complex and multidimensional issue, it can only be addressed with an integrated holistic approach, and with the involvement of all relevant stakeholders (See also the chapter COLLABORATION AND SCHOOL COMMUNITY). Stakeholders outside the school - psychologists, Special Educational Needs specialists, social services, local authorities, youth services, NGOs – may be activated.³⁶ Local community practices developed during the period of school site closure could be further supported and scaled up³⁷.
- vii. **Build community support for new approaches to teaching and learning and fully access external expertise when needed:** Since the role of parents and carers in blended learning is, in most cases, enhanced, it also is important that that the school leadership builds relationships, not only inside the school, but also outside the school community³⁸. School heads and leaders may reach out for support from other schools or provide support to others (networking).
- viii. **Communicate with local and national authorities:** School heads are a crucial link to the rest of the education system. They may need to interpret new regulations and other requirements that come into force regarding blended learning (See the “Legislation” chapter). Vice versa, they may also need to signal additional needs in order to obtain the necessary support from authorities.

³⁵ For example, SELFIE is a free European tool for schools to self-evaluate their capacity in digital education.

https://ec.europa.eu/education/schools-go-digital_en

³⁶ European Commission (2015) *A whole school approach to tackling early school leaving*. Available at :

https://ec.europa.eu/assets/eac/education/experts-groups/2014-2015/school/early-leaving-policy_en.pdf

³⁷ Examples : <https://www.schooleducationgateway.eu/en/pub/resources/toolkitsforschools/detail.cfm?n=12485>

and <https://www.schooleducationgateway.eu/en/pub/resources/toolkitsforschools/detail.cfm?n=12564>

³⁸ Education Development Trust (2016) *Successful school leadership*, UK : Reading, Berkshire

www.educationdevelopmenttrust.com. Available at : <https://files.eric.ed.gov/fulltext/ED565740.pdf>

1.2.2 LEGISLATION TO SUPPORT DECISION-MAKING

Legal frameworks set out expectations and principles for school education but create a flexible structure - a “frame” – for the governing authorities (local authorities, school board, school leadership team) carry out the necessary actions and other specific measures, in the most appropriate way.

It is assumed that, at the start of the 2020/21 academic year, blended learning will be a significant change in practice for most school communities. Legislation may be a pre-requisite for enabling change to happen but should also be viewed as positive support and offering protection for all stakeholders.

A clear legal framework might, therefore, be considered useful for:

- i. **Authorising the use** of distance and online learning as part of “school” education and formally valuing it as an equal counterpart to in-school learning;
- ii. Establishing clear expectations for all schools that gives confidence to the community and system of **guaranteeing the same core provision to all** educators and learners;
- iii. **Recognising the evidence base** for blended learning guidelines and expectations (e.g. recent national or international research; pilot projects; planned review process for future development);
- iv. Describing how **curricula and assessment** may be approached or adjusted to function effectively through both in-school and distance learning;
- v. Setting **guidelines for blended teaching and learning structures** (e.g. division of responsibility between in-school and other environments; use of Learning Management Systems and other resources; minimum or maximum hours/days of distance learning per semester) whilst being flexible and encouraging innovation of practice;
- vi. Requiring that teachers and school leaders have **access to high quality professional development** and other support for blended learning; formally establishing collaborative peer learning networks, and adapting Initial Teacher Education and teacher competence frameworks, if appropriate.
- vii. Defining **related legal requirements** that support blended learning to be effective (e.g. availability of support in the community; expectations for home environment; access to meals; setting boundaries or guidelines for private and non-profit providers; formal agreements with cultural organisations and broadcast media);
- viii. Identifying the necessary **adaptation of established quality assurance processes**;
- ix. Ensure that expectations for blended learning in school education are **coherent with existing frameworks at other education levels** (VET, Higher Education and Adult Learning).

Legislation should be transparent about the roles and relationships between different stakeholders. Ministries, education authorities, training providers, school leadership, and the various policies and frameworks may be in a position of power or authority in the process. However, change is not

possible without - and may in fact be initiated by - the teachers and their self-development and collaboration. Pupils play an equal part in enabling blended learning to function as an approach as it also depends on their own capacity to actively participate as individuals and groups in a spirit of creativity and inquiry.

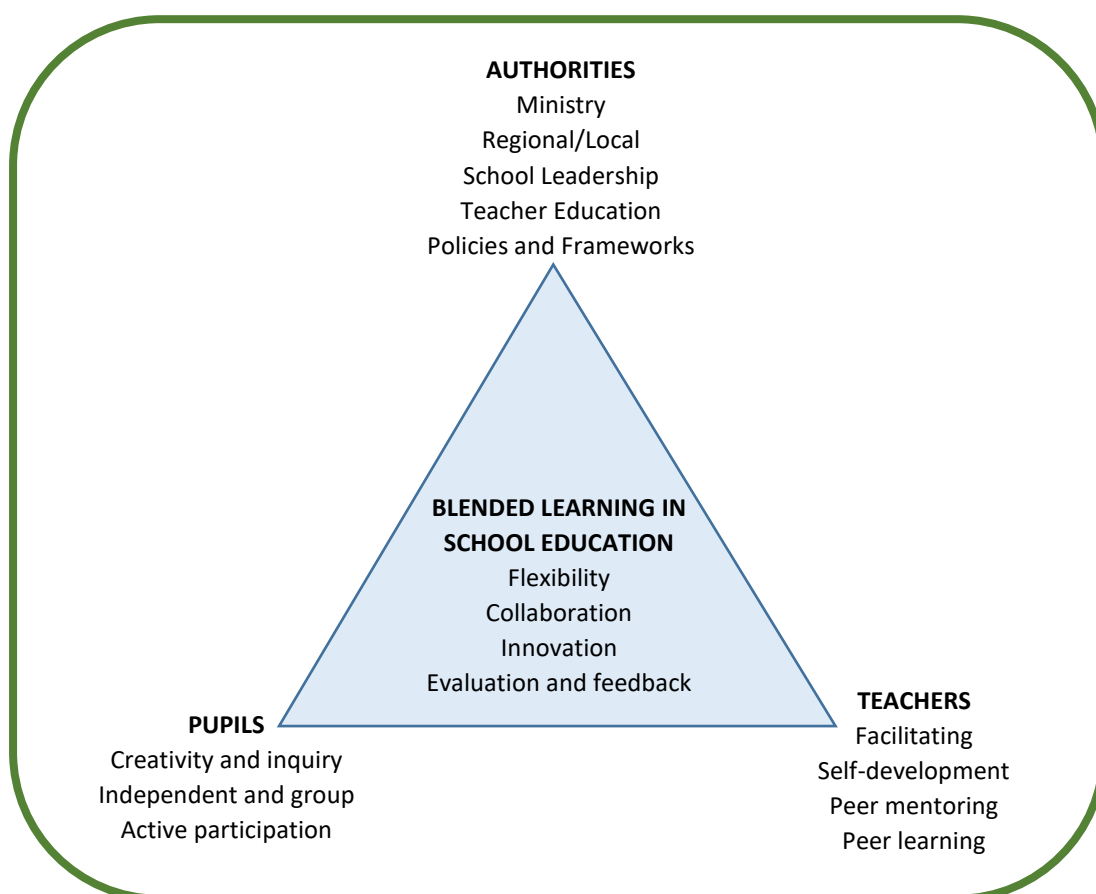


FIGURE 5: the roles and relationships between the main stakeholders³⁹

1.2.3 MANAGING THE IN-SCHOOL AND DISTANCE LEARNING ENVIRONMENTS TO SUPPORT ALL LEARNERS

As blended learning takes place in a combination of on-site and distance⁴⁰ environments, schools may be (newly) responsible for both. Regardless on how national authorities (and legislation) define

³⁹ Adapted from Machumu, H.J. and Zhu, C. (2019) Ch.2 - Building a Conceptual Relational Model Among Blended Learning Aspects in K-20 Education, Emerging Techniques and Applications for Blended Learning in K-20 Classrooms, ed. Kyei-Blankson, Lydia, Ntuli, Esther, Nur-Awaleh, Mohamed A. IGI Global.

⁴⁰ The distance learning environment is often assumed to be the home, but could include: public libraries, museums and galleries, cafes and other social spaces (often with free WiFi), hospitals (in the case of sick or injured children), or sports centres and film studios (in the case of children on professional contracts). In the case of a pandemic or other crisis, some or all of these may be closed except for emergency access.

legal responsibility, all stakeholders will benefit from both environments being as supportive as possible to the learning experience.

Key considerations for managing the in-school and distance environments include:

- i. **Organisation of the school timetable:** How the school day and working hours of staff are structured may benefit from review and increased flexibility. Changes to the timetable may be influenced by whether there is a need to synchronise learning i.e. having the teacher and full class in the same lesson (in-school or online), meaning that they cannot be occupied elsewhere. Teaching and learning hours may also change when a significant number of pupils are not in-school (e.g. VET students on work placement or new crisis response that imposes confinement).

As blended learning may also place more emphasis on practical learning tasks in-school (using a flipped classroom approach to focus the preparatory learning at distance), timetable changes may benefit teaching and learning by offering longer (or double) lesson periods for extended practical or collaborative project work.

The design of blended learning for different age groups may also be reflected in the timetable. For instance, younger pupils may have more teacher contact time or time in-school compared to older pupils. At certain times in the academic year, for instance in the period before examinations, certain year groups may also be allocated increased teacher contact time.

- ii. **Access to devices:** As blended learning is likely to shift teaching and learning resources online, it faces similar challenges to some of those experienced by many schools during the emergency distance learning in spring 2020. Every member of the school will need access to dependable digital devices, a reliable infrastructure (including broadband and WiFi) and knowledgeable IT staff to assist in teachers and learners to use online resources effectively.

The availability of appropriate IT devices, Internet connection with sufficient bandwidth may be a challenge for economically disadvantaged families.

- iii. **Digital tools:** Digital tools can help teachers accomplish daily classroom tasks such as grading, homework assignment, and collection of classwork, student discussions, parent interaction, attendance, and an online class calendar.

Effectively blending classroom-based teaching with distanced requires an easy method to share resources. When lesson plan and resources (i.e. videos, links, and audio) are available online, students can access them according to their own schedules and location. A number of programmes or learning management systems are available for the management of blended learning, both free and fee-based.

Any web-based tools or platforms⁴¹ should be suitable and relevant to pupils' age as well as intuitional and user friendly. Data collection should be compliant with data protection

⁴¹ See, for example, <https://www.slant.co/topics/12425/~virtual-classroom-platforms-for-teachers>

rules.⁴² The accessibility of proposed tools and content should be adaptable for learners with Special Educational Needs. This includes possible language-related obstacles for children whose home language is different to that of school.

For the safety of learners, it may be necessary to review the set-up of secure passwords and logins as well as filters for the use of internet content. IT Infrastructure providers offer many security options and filters that allow educators to block problematic apps and websites.

- iv. Individual support to learners – the work of trained staff:** Blended learning, if appropriately designed, offers the potential to proactively support learners in their specific needs, increase their motivation and ability to work autonomously.

There is large evidence that disadvantaged learners benefit from individual support and personal tutoring. This might traditionally take place mostly in school with a few visits from home-school liaison officers. Consideration should be made as to how such individual support by trained staff can most effectively operate when the teaching and learning is both in-school and also at a distance (maintain home visits, online individual sessions etc.)

Sufficient time – as core working hours – and resources for the team to develop, monitor, assess, and adjust strategies, and to deliver learning support, should be considered.

Individualised education plans may help on-site tasks to complement/compensate distance learning tasks for all pupils, as well as tailor individual support to pupils with Special Education Needs. This is part of the fundamental shift to student-centred learning that a blended learning approach can support.

- v. Individual support to learners – the shared responsibility of parents and guardians:** The involvement of parents in “traditional” homework is not likely to be equal in all families⁴³ and one may assume the same to be true even after the long period of school-site closure.

Consideration and transparent guidelines should be given to how much support/supervision is expected of parents and guardians. The level of support may depend on a range of factors: the educational level, language competences and digital skills of parents; time available (balanced with employment, several young children); and the relationship between parent and child. Extra support may be required where parents and guardians are less able to themselves.

Actively involving parents and pupils themselves in designing/assessing/adjusting the learning tasks may help with the continuity between in-school and distance learning environments. Strategies for active engagement may be offered by parent organisations.⁴⁴

⁴² For guidance, see https://ec.europa.eu/info/law/law-topic/data-protection_en

⁴³ Maša Đurišić and Mila Bunijevac (2007), Parental Involvement as an Important Factor for Successful Education, *Centre for Education Policy Studies Journal - Slovenia*, 7(3). Accessed at <https://files.eric.ed.gov/fulltext/EJ1156936.pdf>

⁴⁴ National organisations or international, such as the European Parents Association <https://euparents.eu/> and COFACE Families Europe <http://www.coface-eu.org/>

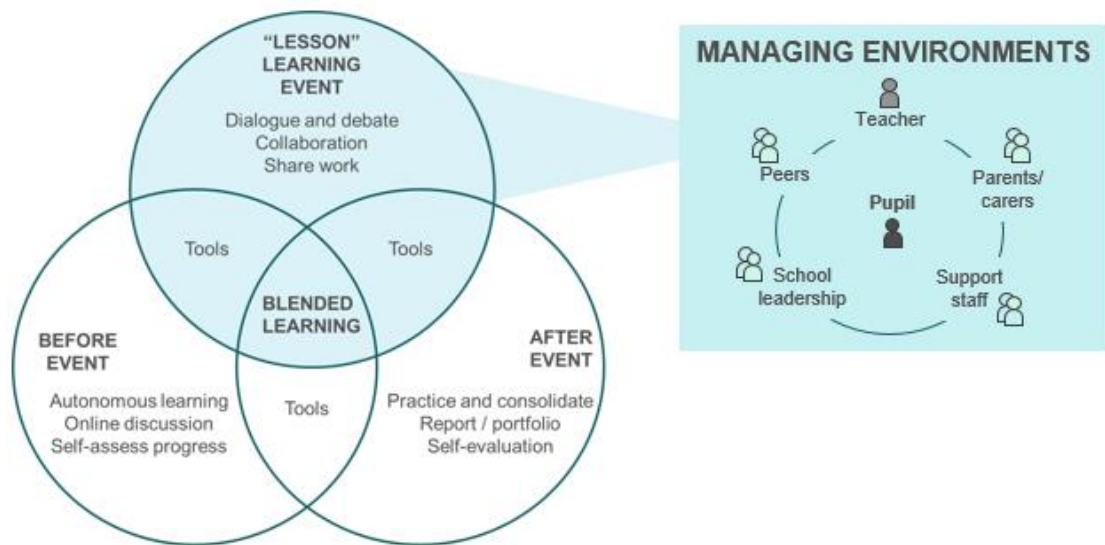


FIGURE 6: the roles of different stakeholders in managing the learning environments

- vi. **Helping learners manage the distance environment:** The school may encounter pupil issues of well-being, stress and emotional difficulties related to the distance (home or other) environment including lack of appropriate space for learning (See also the chapter WELL BEING OF STAFF AND PUPILS). Consideration should be given to helping learners manage their own distance learning environment, by themselves or with peers: the choice of physical space, the atmosphere (e.g. whether to have background music, the company of others, and so on), and time management. Younger and less independent learners will need to co-manage the distance environment with a supportive person (see point v above).
- vii. **Managing VET and work-based learning:** VET's unique feature of requiring learners to apply the abstract knowledge gained in formal educational settings in a work-based context, makes it particularly suited for blended learning.⁴⁵ The most common blended models combine elements of digital-based distance learning for the theoretical part of the curriculum, with on-site time reserved for practical learning.⁴⁶ However, the COVID-19 crisis revealed that the work-based learning component of VET lacked sufficient tools and processes to support practical learning at a distance from tutors, employers and equipment.⁴⁷

Vocational education taking place in the dual contexts of workplace and school often lacks the tools to integrate these two elements. Nevertheless, digital tools are being developed⁴⁸

⁴⁵ Butler, J., & Brooker, R. (1998). The learning context within technical and further education colleges as perceived by apprentices and their workplace supervisors. *Journal of Vocational Education and Training*, 50, 79–96.

⁴⁶ “Exploring Blended Learning approaches for VET” - project funded by Erasmus+ programme

<https://ec.europa.eu/programmes/erasmus-plus/projects/eplu-project-details/#project/2016-1-UK01-KA202-024636>

⁴⁷ During the school closure, work-based learning was maintained in very few European countries (i.e. Denmark, Ireland, Sweden and Finland) and only in sectors where companies' activities were still going on. <https://www.schooleducationgateway.eu/en/pub/latest/news/vet-through-distance-learning.htm>

⁴⁸ European Commission/Joint Research Centre (2020) “Adapting the SELFIE tool for work-based learning systems in Vocational Education and Training” : a feasibility study, (pg: 12-14)

https://publications.jrc.ec.europa.eu/repository/bitstream/JRC119707/200211_selfie_wbl_jrc_tech_report.pdf

to support coordination between the student, VET institution and companies⁴⁹ and emphasise the importance of shared reflection.⁵⁰ Evidence is growing of the benefits of incorporating gaming elements into digital tools and the use of immersive simulations like virtual and augmented reality⁵¹ that may provide new ways of teaching and assessing learners.⁵²

1.2.4 TEACHERS: THEIR ROLE, COMPETENCES AND WORKING CONDITIONS

For any teaching and learning approach, teachers will be committed to an environment where all pupils can participate and reach their full potential. A typical defined boundary when designing the approach is the in-school “lesson”: a fixed period of time where teachers and pupils share the same space. Another typical boundary is the subject curriculum: expected learning outcomes for all pupils on defined topics. Combining on-site and distance learning however requires a more holistic perspective, as the scope for a personalised (learner-centred) approach potentially increases. Learning outcomes based on progression in various competence areas are potentially more likely to be valued than the time spent on a task, whilst ensuring that learners can develop all competences in a balanced way⁵³.

Teacher decision-making regarding blended learning is likely to be based on: a) the requirements of the curriculum (which may or may not have changed to take into account blended learning approaches); b) the needs and capacity of their own learners (including what learning support they have elsewhere); and c) their own capacity as a teacher; and d) the shared approach of the school that they are working in.

Key considerations concerning the role, competences and working conditions of teachers in a blended learning approach include the ability to:

- i. **Select an appropriate teaching and learning approach with learning tasks that are complementary and coherent across learning environments:** As with any learning environment, teachers need to select appropriate learning tasks; however, this may need a certain new level of competence to identify learning tasks that are complementary and coherent across learning environments. Teaching at distance is not merely a case of replicating in-school practice.

Given that teachers are likely to encounter an increasing number of new tools, teachers will be also be continuously evaluating and update their teaching strategies to ensure their

⁴⁹ Such as the [Trialog App](https://ec.europa.eu/programmes/erasmus-plus/projects/eplu-project-details/#project/2016-1-RO01-KA202-024528) co-funded by Erasmus+ programme <https://ec.europa.eu/programmes/erasmus-plus/projects/eplu-project-details/#project/2016-1-RO01-KA202-024528>

⁵⁰ For example, digital technologies based on ‘Erfahrungsraum’ multidimensional pedagogical model (that emphasizes the importance of shared reflection processes to turn concrete experiences into relevant integrated knowledge) such as [REALTO](https://www.tandfonline.com/doi/full/10.1080/13636820.2015.1061041?scroll=top&needAccess=true) platform. <https://www.tandfonline.com/doi/full/10.1080/13636820.2015.1061041?scroll=top&needAccess=true>

⁵¹ Andrew McCoshan (2020) “Digital learning in VET: why COVID-19 is a wake-up call” School Education Gateway/European Commission. Accessed at : <https://www.schooleducationgateway.eu/en/pub/viewpoints/experts/digital-learning-in-vet.htm>

⁵² Examples include [VRhoogte](#) tool that teaches young people how to erect scaffolding and spray paint simulations like [Simspray](#) where learners can spray-paint as often as they like and get instant feedback, which is potentially more precise and detailed than is normally given to the learner.

⁵³ Susan Patrick Chris Sturgis (March 2015) *Maximizing Competency Education and Blended Learning: Insights from Experts* Accessed at: <https://files.eric.ed.gov/fulltext/ED557755.pdf>

effectiveness in facilitating learning tasks⁵⁴. Moreover, it is not sufficient that the teacher him/herself is able to understand, make informed decisions about, and use the various strategies for learning. He/she also has to be able to support their *learners* to be capable of managing their learning and understand the blended learning approach, including how to use technology and diverse learning resources in productive ways⁵⁵.

- ii. **Shift mindset and share challenges:** As organising blended learning requires constant adaptation of teaching, teachers' different attitudes towards education and willingness to change become relevant.⁵⁶ This typology indicates that not all teachers think about the design of blended learning in the same way, and findings show that most teachers are led by practical considerations rather than attending to individual students' needs. Addressing this issue may be done through dialogue with peers in order to dispel anxieties, share challenges and solutions, and better reach a shared vision (See chapters on SCHOOL COMMUNITY, WELL-BEING OF STAFF AND PUPILS and SCHOOL LEADERSHIP).
- iii. **Take risks in order to innovate practice and build new experiences:** It is unrealistic to expect all teachers to be suddenly highly experienced and competent in blended learning approaches in the space of a few months. They also work in different contexts. Therefore, teachers should have the opportunity, collaborative support, and willingness to take risks and innovate in order to adapt their pedagogical approaches in a way that is effective for their own learners.
- iv. **Design appropriate assessment for learning:** Assessment processes and tools should be coherent between in-school and distance tasks and gives all pupils sufficient opportunity to demonstrate and understand their progression and future needs (see Chapter on LEARNER ASSESSMENT).
- v. **Support pupils as individuals and as a class community:** Consideration may be given as how to maintain regular contact with pupils, such as arranging for supportive one-to-one communication, as well as communication with the learning group⁵⁷. Teachers may also consider how to create and maintain a culture of collaboration and trust⁵⁸ – through dialogue as well as learning tasks – that contribute to the sense of community, transcending different learning environments. This facilitation may also help dispel the teacher's own anxieties around different (potentially more distant) relationships with pupils who are less frequently in-school.

⁵⁴ iNACOL *Blended Learning Teacher Competency Framework*. Accessed at : <https://files.eric.ed.gov/fulltext/ED561318.pdf>

⁵⁵ Lund, A., Furberg, A., Bakken, J., Lyngvær Engelién, K. (2014) What Does Professional Digital Competence Mean in Teacher Education? *Nordic Journal of Digital Literacy*, 04 / 2014 (Vol. 9).

⁵⁶ Studies addressed different typologies of beliefs about designing blended learning, differentiating three profiles of instructors: a disregard profile – instructors believe that additional support is not necessary; an adaptation profile – instructors are open to adjustments to existing learning arrangements; and a transformation profile – instructors believe that blended learning arrangements should be designed in a completely different way, and be tailored to the characteristics of the specific learner group. See Boelens et. al. (2018), *The design of blended learning in response to student diversity in higher education: Instructors' views and use of differentiated instruction in blended learning*. <https://doi.org/10.1016/j.compedu.2018.02.009>

⁵⁷ Magdalena Roszak, Barbara Kołodziejczak, "Teachers' skills and ICTcompetencies in blended learning", Department of Computer Science and Statistics, Poznan University of Medical Sciences. Accessed at : <https://pdfs.semanticscholar.org/e3b1/70e64eb0d55dd55fece59fb939a620a9549c.pdf>

⁵⁸ Experts propose the approach of using the acronym "TRICK," which stands for trust, respect, independence, collaboration, and kindness. See Esther Wojcicki, Lance Izumi, Alicia Chang (2015) *Moonshots in Education: Blended Learning in the Classroom*, Pacific Research Institute.

- vi. **Undertake regular reflection and continuous development:** The blended learning approach – particularly if it is a new approach for the school – requires constant adaptation of teaching based on reflection (self-evaluation and by others) and feedback, in order to respond the learners’ needs effectively. This is an established part of managing one’s own professional development.
- vii. **Share practice:** Embedding a blended learning approach across a whole school – or a whole education system - requires a significant amount of innovation on the part of teachers and is likely to feel like rapid change. The importance of sharing practice is, therefore, heightened in these more exceptional circumstances. Teachers should recognise their role within the school as a “learning community” to include peer observation, mentoring and coaching as well as co-designing lessons and resources.⁵⁹ How such collaboration can be achieved at a distance may need the use of additional tools, e.g. video, and time.



FIGURE 7: Teacher competence in blended learning⁶⁰

- viii. **Take leadership roles where appropriate:** If a teacher has developed particular expertise, they may be encouraged to take a leading role amidst their peers. This may also lead to greater motivation as a professional. The concept of “distributed leadership” describes where teachers can further their knowledge and skills by taking decisions, individually and collectively within a clearly defined framework of school leadership⁶¹. This is particularly

⁵⁹ European Commission (2018) Boosting Teacher Quality: pathways to effective policies. Accessible at <https://op.europa.eu/en/publication-detail/-/publication/95e81178-896b-11e8-ac6a-01aa75ed71a1>

⁶⁰ Source: iNACOL Blended Learning Teacher Competency Framework. Accessed at : <https://files.eric.ed.gov/fulltext/ED561318.pdf>

⁶¹ See <http://cstp-wa.org/cstp2013/wp-content/uploads/2014/06/Teacher-Leadership-Framework.pdf>

important in blended learning that requires, in addition to teaching skills, a vision, high working ethics, team skills, judgement and assessment skills and organisational skills and collaboration in order to make blended learning effective⁶².

- ix. **Liaise with families and the wider school community:** As highlighted elsewhere, communication and liaison with stakeholders in the wider school community is important for the continuity of learning across different environments. How to effectively achieve this is a key consideration. Direct communication and guidelines may be considered for families – or those who are most likely to supervise the work of pupils, particularly younger pupils – in order that the distance learning tasks are fully understood and supported. An integrated Learning Management System⁶³ may be useful.
- x. **Support newly qualified teachers:** Beginning teachers, who have just completed their diplomas will be joining schools and the wider profession with potentially limited recent practical experience. They are also unlikely to be fully experienced in blended learning. These professionals may require even more support than normally offered to confidently develop appropriate pedagogical approaches that suit their own context and capacity.
- xi. **Manage own working conditions:** All teachers should be clear on the expectations (of school management team and education authorities) of their in-school and distance working conditions. This may include establishing ways to keep to contracted hours, support for their own “distance teaching” where this is required/possible, and support for extra costs such as devices or travel.

1.2.5 LEARNER ASSESSMENT

Assessment practices shape teaching and learning and the focus of assessment at national and school level dictates what learning is understood as important and which aspects of learning merit and require more time and effort.⁶⁴ Assessment includes:

- **Ongoing (formative) assessment by the teacher of pupils, and by pupils of themselves** (self-assessment), in order to help manage their progression and plan future tasks;
- **Summative assessment by the teacher** of pupils at the end of a period of study in order to establish an attainment level (a grade or description), typically recorded by the school in a report and shared with the pupils and their parents (or legal guardians);
- **Summative assessment by the school, region or national system** of all pupils of a certain age/grade in order to establish attainment levels in a range of subjects that will lead to awarding one or more “certificates” or “diplomas”. This has added significance in that they can determine the next stage of the learner’s education: to study particular subjects at upper secondary level; to repeat a year; or the opportunity to enter further education and training or employment.

⁶² See <https://www.ets.org/Media/Research/pdf/RR-10-27.pdf>

⁶³ A Learning Management System (LMS) is software that not only helps to deliver a course of study; it can also assist with the processing of different kinds of data (including learner assessment), with reporting, and with communication with external stakeholders, including parents and education authorities. Well-known software includes – but is not limited to – Moodle, Blackboard, Schoology and Edmodo.

⁶⁴ NESET 2017 - https://nesetweb.eu/wp-content/uploads/2019/06/AR1_20172.pdf

School closure, and the distance learning that was established to support continuity of learner development, raised questions about both the pedagogical (teaching and learning) and managerial (process, resources, responsibilities) approach to assessment and final examinations. Experts would argue that, with greater familiarity and acceptance of a variety of existing approaches, and with forward planning, assessment does not have to be postponed or only take place on the school site. In fact, changing approaches to assessment may bring about a more positive shift to self-directed learning and increase the self-evaluation capacity of pupils.⁶⁵

Adapting assessment approaches may also require a parallel review of **national and school curricula** as the expectations set down for learner competences affect the design of pedagogical approach, including assessment (see Chapters SCHOOL LEADERSHIP, LEGISLATION TO SUPPORT DECISION-MAKING and QUALITY ASSURANCE: EVALUATION AND FEEDBACK).

Key considerations for assessment in blended learning include:

- i. **Transparency:** whichever approaches to be used should have a clear purpose and be communicated in good time to those involved to allow for full preparation and to avoid anxiety. Learning Management System (LMS) software requires some investment but if designed appropriately, can help to better communicate and manage blended assessment processes, alongside many other areas, between the school, pupils and parents/carers.⁶⁶ Any use of digital tools will require a data management strategy that considers GDPR.⁶⁷
- ii. **Equity:** assessment processes and tools should provide all learners with equal opportunities to demonstrate their competence and better understand their progression and needs. This means considering the parity of in-school and distance assessment, as well as the parity of assessment approaches used by schools across the system, using moderation where appropriate.⁶⁸ The use of online examinations software may provide a trusted approach to formal summative assessment.⁶⁹
- iii. **Self-efficacy:** self-assessment by learners of their own progress, as well as peer assessment, can contribute to increased motivation and a sense of responsibility and agency in the learning process.⁷⁰ As part of ongoing assessment it can help the teacher understand what has been gained from initial (e.g. distance) tasks and design the next stages. By reflecting on a course, pupils are encouraged to consider the whole process, both at distance and in-school.
- iv. **Familiarity:** new assessment approaches should be gradually introduced into schools and the system to build the confidence and competence of all those involved. Nevertheless, this should not prevent necessary immediate change. Teachers and school leaders may benefit from

⁶⁵ Inge de Waars - Student Evaluation During and After COVID-19 – EDEN, Wednesday 22 April 2020. www.eden-online.org/student-evaluation-during-and-after-covid-19/

⁶⁶ See, for example Alan Tait (Professor Emeritus of Distance Education and Development at the Open University, UK) *Education for Development: From Distance to Open Education*. <https://jl4d.org/index.php/ejl4d/article/view/294/313>

⁶⁷ For a discussion with links to resources see, for example, <https://theconversation.com/childrens-privacy-is-at-risk-with-rapid-shifts-to-online-schooling-under-coronavirus-135787>

⁶⁸ The New Zealand Ministry of Education outlines the purpose, process and benefits of the moderation of assessment: <https://assessment.tki.org.nz/Moderation/Moderation-purposes>

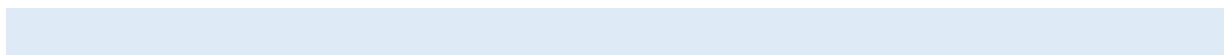
⁶⁹ See, for example, the SURF (Netherlands ICT education and research organisation) White Paper on Online Proctoring (the remote surveillance of examinations) - https://www.surf.nl/files/2019-04/whitepaper-online-proctoring_en.pdf

⁷⁰ Alfredo Soeiro (University of Porto, Portugal) - How to design and manage assessments for online learning – EDEN, Monday, 20 April 2020, <https://www.eden-online.org/how-to-design-and-manage-assessments-for-online-learning/>

See also Ireland's National Council for Curriculum and Assessment Guide on Student Reflection: https://ncca.ie/media/1926/assessment-booklet-4_en.pdf

professional development (networking, training) and guidelines, particularly regarding online assessment.⁷¹

- v. **Regularity:** a single assessment period at the end of the school year allows the maximum time for learner development and may be used to decide progress to the next stage; however, this relies on the alignment of many conditions. The curriculum may be usefully divided into modules that are assessed as they are concluded; an approach already used in some systems.⁷² This may help the fluid movement between in-school and distance learning over the course of a year of study and alleviate pressure of single assessment.
- vi. **Diversity:** a long-term strategy for blended learning requires the appropriate assessment of broad competence development, not just knowledge recall. Using Learning Diaries or Personal Development Plans can help track individual progression across both in-school and distance environments, and inform a personalised approach going forward. Computer-Based Assessment (quizzes, games, ePortfolios) offers ways of understanding and evidencing learner progression that can be used both environments. ePortfolios also enable a range of competences to be assessed and with a degree of choice for the learner to build it in a way that motivates them – important for distance learning - and showcases their strengths.⁷³ Blended learning requires a defined strategy for the assessment of practical skills. Videos (live and recorded) and online simulations may enable some assessment at distance, coupled with flexible opportunities for on-site (school or work placement) assessment.⁷⁴
- vii. **Flexibility:** blended learning requires a flexibility that permits, for example, assessment to take place over a number of days – open assessment – or incorporate group as well as individual assessment, in the case of collaborative project work. Schools, teachers, and pupils may be given some choice in the most appropriate type of assessment for their own subject matter and context. The use of some digital tools (for both in-school and distance assessment) can also relieve the burden of grading by teachers and release time for other learning tasks.⁷⁵



⁷¹ In a European survey (9 April-10 May 2020), 67% respondents reported that this was their first experience of online teaching. <https://www.schooleducationgateway.eu/en/pub/viewpoints/surveys/survey-on-online-teaching.htm>

⁷² For example, Lithuania switched to a modular curriculum for VET in 2017, which enabled diplomas to be awarded in 2020 to those completing more than 50% of their overall course, despite the school closures. <https://www.e-tar.lt/portal/lt/legalAct/8d34ecd05c0411e79198ffdb108a3753>

⁷³ European Commission / Joint Research Centre (2013) - <https://publications.jrc.ec.europa.eu/repository/bitstream/JRC76971/jrc76971.pdf>

⁷⁴ Discussed by expert representatives in the European Apprenticeships Alliance webinar series (May 2020) <https://ec.europa.eu/social/main.jsp?langId=en&catId=1147&eventsId=1642&furtherEvents=yes>

⁷⁵ European Commission / Joint Research Centre (2013) - <https://publications.jrc.ec.europa.eu/repository/bitstream/JRC76971/jrc76971.pdf>

1.2.6 WELL-BEING OF STAFF AND PUPILS

By moving to a blended learning model, routines will change and pose specific challenges to the well-being and mental health of education staff, learners and parents. The move to blended learning will equally affect the ability of schools to respond to these challenges and provide support to students and staff. The COVID-19 crisis has added extra mental health and well-being concerns⁷⁶ for schools, and they will play an important role in mitigating the negative psychological effects of the crisis.

Key considerations for well-being include:

i. Identifying causes of anxiety and stress:

The various reasons for increase in anxiety levels and concerns, not only in the context of a crisis that would force full distance learning, but still potentially also in any blended learning approach. Anxiety and stress can lead to de-motivation in both teaching and learning, and further isolation. The causes include:

- Potential loss of immediate contact with friends or colleagues;
- Increase of workload and responsibility caused by the change in approach (e.g. more project-based, more preparation) or by “adding on” distance learning tasks, rather than co-ordinating between the environments;
- Concerns about how work will be assessed, and efforts recognised;
- Concern about the impact on university (final year students) or career prospects (pupils and teachers) if the distance learning aspects are not embedded or valued;
- Loss of structure that school can provide – and equally the stress of changes to familiar rules;
- Loss of a ‘safe’ place away from difficult or dangerous home environments for some children;
- Extended exposures to digital screens or stress caused by cyber-bullying;

Simply identifying the possible causes is the first step to developing ways to prevent, mitigate or overcome such problems.

ii. Developing guidance for the whole school community:

A well-being approach, including for blended learning, will need to take into account children, teaching staff as well as parents and administrative and management staff. One cannot ensure the well-being of one group without paying attention to the well-being to all the other groups in a schools’ eco-system.

Guidance may be provided – by the school or local/national authorities - on an array of issues to help pupils and teachers cope with any amount of reduced time in-school, such as:

- Maintaining individual social contacts and a sense of being a part of the school community (see chapter on School Community);
- Managing own expectations and motivations for development and time management for completing school tasks.

⁷⁶ According to World Health Organization, coping with stress and anxiety represents the main mental health challenge of the COVID-19 pandemic. <http://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/news/news/2020/3/mental-health-and-psychological-resilience-during-the-covid-19-pandemic>

- A positive use and personal management of digital tools and social media;
- Balanced diet and daily exercise;⁷⁷

iii. Developing competences for life:

In this context, the key competence “Personal, Social and Learning to learn”, as described in the 2018 Council Recommendation on key competences for lifelong learning⁷⁸ becomes relevant to look at. This competence is defined as *“the ability to reflect upon oneself, effectively manage time and information, work with others in a constructive way, remain resilient and manage one’s own learning and career”*. Specifically, attention can be directed towards the following:

- Personal area, including self-regulation, flexibility and wellbeing;
- Social area, including empathy, communication and collaboration;
- Learning to learn area, including growth mind-set, critical thinking and managing learning.

In a blended learning model, consideration will have to be given to how this competence can be effectively nurtured and (self-)evaluated in both the in-school and “outside world” environments. The environments are complementary and a blended approach may be beneficial in bringing the two closer together. Given the emphasis on self-direction and reflection, the competence is a necessary part of ensuring blended learning works well – in other words, the competence is developed both *for* and *through* blended learning.

iv. Making time for dialogue within the school day:

Blended learning could act as a catalyst for extra opportunities to support the well-being of pupils and teachers, in that the increased attention to effective modes of communication may inspire the use of tools (for example, well-being apps or social media groups) that can offer more individualised support to each person and situation.

However, the importance of in-person (same physical space) contact and socialising - by pupils with pupils, teachers with pupils, teachers with families, and teachers with teachers - cannot be underestimated. In a blended learning approach the “on-site” contact time could usefully prioritise opportunities for pupils and school staff to have informal exchanges and discussions about experiences and strategies for well-being, alongside curriculum lessons. Inspiration may be taken from research⁷⁹ that has documented responses to crises and from recommendations developed during the COVID-19 crisis⁸⁰.

⁷⁷ Evidence shows that physical activity is associated with improvement of brain functioning, cognition and school results. The annex to the Report of the European Commission Expert group on “health-enhancing physical activity” (2015) gathers scientific evidence on the links between children’s level of physical activity vs. sedentary and their school results.

https://eacea.ec.europa.eu/sites/eacea-site/files/recommendations_pe_at_schools_2015.pdf

⁷⁸ https://ec.europa.eu/education/education-in-the-eu/council-recommendation-on-key-competences-for-lifelong-learning_en

⁷⁹ Polizzi, C., Lynn, S.J., Perry, A. (2020). Stress and Coping in the Time of COVID-19: Pathways to Resilience and Recovery. *Clinical Neuropsychiatry*, 17 (2), 59-62. <https://doi.org/10.36131/ CN20200204>

⁸⁰ These guidelines were developed during the COVID crisis but could be applied to blended learning : **Luxembourg:** In the wake of the COVID-19 crisis, a web portal was prepared, with simple steps and recommendations to improve well-being. The aim was to support teachers, learners and parents with concrete pieces of advice, to get through this period of confinement and make the best out of it. This series of articles has been elaborated by experts from the socio-educational sector in Luxembourg and it is completed on an on-going basis. The web portal (<https://www.schouldoheem.lu>) is available in five languages, Luxembourgish, English, French, German and Portuguese.

Ireland: Irish authorities have prepared a similar web portal (www.gov.ie/en/collection/965639-continuity-of-schooling/) on Guidelines for parents/guardians of primary school pupils, on the continuity of schools and including advice on well-

1.2.7 COLLABORATION AND SCHOOL COMMUNITY

A blended learning approach, combining in-school and distance learning environments, should involve a strong collaboration between a wide range of cross-sectoral stakeholders and the community at large.⁸¹ Such a « Whole School Approach » enables schools to respond adequately to new and complex challenges.

Whilst collaboration can be key to school development and improving learning approaches, the very nature of blended learning – with community members potentially more regularly separated from each other – can potentially fracture the sense of community.

Key considerations in fostering collaboration and maintaining a sense of community with a blended learning approach include:

i. Maintaining communication:

Mechanisms to ensure a reciprocal flow of information between all staff, pupils and other stakeholders will be vital. Learning Management Systems have proved invaluable in recent months in supporting distance learning and maintaining communication regarding teaching and learning. The inclusion of student voice – through student councils and other informal surveying – may be considered in particular.

ii. Promoting teacher collaboration:

In a time of intense and rapid change, staff are experiencing their own steep learning curves. Consideration may be given to ways to support teacher collaboration (including lesson observation) both in-school and at distance, so that change to practice and professional identity can be a shared challenge and journey, rather than a period of isolation. This will support the profession as a whole - with communication between schools and within/between professional organisations - as well as schools and individual teachers.

iii. Supporting pupil sense of identity and belonging

Pupils may benefit from additional measures – both in-school and at a distance - to ensure their sense of value and belonging to the school community as an important part of motivation for learning. Attention may be paid to the (short) time delay in giving feedback on distance learning tasks, compared to in-school where feedback is more immediate. Some learning tasks may also be more deliberately set as group tasks to compensate for other times where learning is highly independent. Other opportunities outside of structured learning tasks may also be considered for

being. The portal is multilingual: besides Irish and English, it is also available in Albanian, Arabic, Farsi, French, Georgian, Kurdish, Pashto, Somali, Spanish and Urdu

⁸¹ See the European Toolkit for Schools

<https://www.schooleducationgateway.eu/en/pub/resources/toolkitsforschools/area.cfm?a=5>

See also A whole school approach to tackling early school leaving, European Commission 2015

https://ec.europa.eu/assets/eac/education/experts-groups/2014-2015/school/early-leaving-policy_en.pdf

pupils to communicate (with each other and with school staff or external stakeholders) on a range of topics that are meaningful to them, but which add to their sense of belonging to a supportive school community.

iv. Co-operation with parents and families:

Since the role of parents and carers to support learners in a blended approach is, in most cases, enhanced, schools (leaders, teachers and support staff) need to establish effective communication channels and relationships with families as part of the school community.

Whilst digital tools such as Learner Management Systems can be useful for information and transparency, time for personal and social interaction is equally important. Interaction between families – via social media or being part of parent organisations – may also be useful to support the overall blended learning approach of the school.

v. Co-operation with other external stakeholders:

Different stakeholders can bring diverse and complementary perspectives in understanding barriers to learning and can offer solutions, which are tailored to the specific needs of each learner. They can also help to address difficulties and problems that go beyond the immediate school environment (for example, donate food and clothing, support parents' literacy, facilitate access to healthcare and other services) and make a wide range of extra-curricular opportunities available.

Cooperation with professionals and services in different areas (such as social workers, youth services and organisations, intercultural mediators, nurses, psychologists and other therapists, NGOs and other community-based organisations from sport, cultural environment and active citizenship sectors, police, local authorities, and others) can be very beneficial to support the learners and support schools also in the design and the implementation of blended learning.

vi. Broadening the use of the school site:

Whilst some teaching and learning may shift away from the school site, the school site may positively change its role in the community as a site for more than just young pupils and their teachers.

Schools that have invested in community libraries, sports centres and other shared facilities may have the capacity to promote extended-hours access to their premises for members of the wider community. Opening up school facilities outside of school hours for outreach and extra-curricular activities can be highly advantageous. It encourages community empowerment and helps to bridge the gap between schools and parents, particularly those who are unfamiliar with the school system.

1.2.8 QUALITY ASSURANCE: EVALUATION AND FEEDBACK

Recent research-based recommendations point towards an effective interplay between internal and external quality assurance mechanisms – in order to ensure that they best serve school development and innovation. Blending internal and external evaluation and feedback would seem to make sense where the teaching and learning is also taking place in diverse environments.

Conditions for effective quality assurance for school development include ensuring ownership of the process through meaningful dialogue and actions, and an opportunity for 'out of the box' thinking and creativity, with an emphasis on improvement more than quality 'control'.⁸²

Although constructed with an older age group of students in mind, the various guidelines for the quality assurance of distance and e-learning in higher education can still be very relevant and useful. ENQA's 2018 *Considerations for quality assurance of e-learning provision* outlines a number of different considerations and indicators for external and internal evaluation of processes and programmes. For example:

"As with traditional, campus-based provision, external quality assurance will take into account an institution's particularities – e-learning included. Usually the procedure will include the involvement of relevant stakeholders at all levels. The teaching and learning process, the learning resources, the VLE [virtual learning environment], and the student support system for e-learning will be additionally considered. It is a good opportunity for institutions to demonstrate their involvement in pedagogical innovation projects and the involvement of stakeholders (students and teaching staff involved with e-learning) in the design of methodologies."⁸³

There are five **areas for consideration in which established quality assurance processes may be usefully adapted** to support a new blend of in-school and distance learning:

- How to evaluate and feed back on the **teaching and learning that happens outside of school**, including assessment, and the **combination of in-school and distance teaching and learning**
- How to evaluate and feed back on the **school climate/culture from an in-school and distance perspective** (sense of community and identity, students' and teachers' well-being, working conditions, relationships with stakeholders)
- How to evaluate and feed back on the **management of staff resources**;
- How to **monitor practices and new developments** across the system that takes into account both distance and in-school teaching and learning
- How to manage and incorporate evaluation and feed back of/via **other providers** (e.g. broadcast media, private organisations)

⁸² https://www.schooleducationgateway.eu/downloads/Governance/2018-wgs2-quality-assurance-school_en.pdf

⁸³ <https://enqa.eu/indirme/Considerations%20for%20QA%20of%20e-learning%20provision.pdf>



FIGURE 8: Five areas for adapting established quality assurance processes

i. Teaching and learning that happens outside of school, and the combination of in-school and distance teaching and learning:

If distance teaching and learning is not included in quality assurance – i.e. not inspected or at least self-evaluated and reported – it not only misses an opportunity for valuable feedback but also runs the risk of a poor reputation compared to other “regulated” learning environments.⁸⁴ Actions that could be considered include other teachers (internal evaluation) and inspectors (external evaluation) joining online sessions⁸⁵ as well as classroom visits and guidelines to teachers on how to evaluate their own practices in blended learning. Inspectors’ advice can help schools innovate their practices and shape blended learning to empower students and enhance opportunities for individualised approaches.

ii. Evaluating the school climate/culture from an in-school and distance perspective:

Evaluating the sense of community and identity, students’ and teachers’ well-being, working conditions, and relationships with stakeholders needs to be done from both an in-school and distance perspective.

As an internal (within the school community) approach to generating data and facilitating useful dialogue, existing networks and organisations could be activated to gather feedback and offer

⁸⁴ Bacsich, Paul. (2012). Virtual schools and colleges providing alternatives for successful learning volume 1. p. 113 https://www.researchgate.net/publication/339537812_VIRTUAL_SCHOOLS_AND_COLLEGES_PROVIDING_ALTERNATIVES_F_OR_SUCCESSFUL_LEARNING_VOLUME_1

⁸⁵ The [Distance Learning Evaluation Tool](#) is a joint initiative between the UAE Ministry of Education (MoE), the Knowledge and Human Development Authority (KHDA), the Abu Dhabi Department of Education and Knowledge (ADEK) and the Sharjah Private Education Authority Ministry of Education (SPEA) designed to evaluate the quality of distance learning provided by public and private schools in the UAE. Teams from these organisations interviewed principals and teachers at public and private schools across the UAE to discuss the implementation of distance learning by their schools, and to gain an understanding of how it can be improved. The evaluation covers: a) Students’ distance learning and wellbeing, b) Teaching and monitoring of students’ learning c) Leading and managing students’ learning. Each of these zones is subdivided into themes, which are supported by descriptors. Evaluation criteria and processes were developed and piloted with a number of public and private schools and insights gained during these pilot evaluations were used. Each school evaluation will be conducted remotely and is expected to take approximately five hours. It will include online meetings with the principal and senior leadership team, as well as remote observation of lessons. A full description is available at <https://www.khda.gov.ae/CMS/WebParts/TextEditor/Documents/Distance-Learning-Evaluation-Tool-English.pdf>

advice and support to staff and pupils.⁸⁶ External evaluation of the school climate also requires coherent processes that can generate data about not only teaching and learning across the different environments, but also how the blended approach is working effectively in terms of staff and pupil well-being and the sense of community.

iii. Evaluating the management of staff resources:

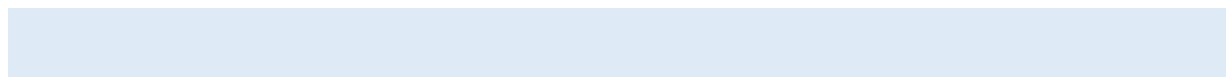
The combination of in-school and distance learning poses challenges in terms of organisation of work and workload of teachers. Teachers' work needs to be organised in such a way as to provide the best education to all students, with additional support to the most vulnerable ones. This may be added to existing evaluation of staff resources. Workload is related to teacher well-being and may also be considered when evaluating the broad school climate/culture (see above).

iv. Monitoring practices and new developments across the system:

During the recent school site closures, numerous international and national surveys have been deployed⁸⁷ as a way of better understanding school, teacher and student experiences. Without overburdening stakeholders with feedback mechanisms, such practices may be usefully continued in order to monitor the ongoing situation.

v. Evaluation and feed back of/via other providers:

Numerous countries have activated broadcast media (television) to provide learning content and experiences for school pupils.⁸⁸ However, how those providers are evaluated alongside other education providers is less clear and may need to be considered. Equally, these providers may generate useful feedback data (e.g. likes, comments, quiz responses) from users.



⁸⁶ For example, in Estonia, the “Masters teachers” network has been activated to gather feedback from teachers and students about their distance learning experiences and to offer support and advice. Reported in European Training Foundation webinar, 26 May 2020 – Supporting Vocational Teachers under the Lock Down.

⁸⁷ For example: <https://openspace.etf.europa.eu/events/vocational-learning-distance-supporting-vocational-teachers-under-lock-down>

⁸⁸ See <https://www.worldbank.org/en/topic/edutech/brief/how-countries-are-using-edtech-to-support-remote-learning-during-the-covid-19-pandemic>

PART TWO

How can blended learning work? – inspiration from European tools and projects

ERASMUS+: BLENDED MOBILITY AND CAPACITY BUILDING

The Erasmus+ programme (2014-2020)⁸⁹ has offered many opportunities to support the development of schools, school education professionals, and pupils. These opportunities will be reinforced in the next programme (2021-2027) around three main strands, and could support the development of a blended learning approach:

- I. **Partnerships for cooperation** for any kind of school education organisations to exchange good practices, experiences and design together innovative teaching methodologies and products with their peers in other European countries. Such cooperations are effective ways to be inspired and develop competences in pedagogical approaches. Examples from the current programme that have previously explored blended learning can be found below.
- II. **Professional development through mobility activities:** mobility activities enable teachers and school leaders to develop their competences. Mobility activities are a means to address individual training needs in specific areas such as digital skills, necessary for organising blended learning.
- III. **Blended mobility:** The Erasmus+ programme supports blended mobility, which is the combination of physical mobility of teachers or learners with a virtual component facilitating collaborative online learning exchange (for example through eTwinning - see below). Blended mobility makes an additional contribution to improving digital competence due to the online element. The next programme will strengthen and further encourage the use of virtual cooperation to complement physical mobility.

eTWINNING: ONLINE PROFESSIONAL DEVELOPMENT AND COLLABORATION

eTwinning⁹⁰ is the community for schools in Europe, offering teachers and school staff a safe platform for collaboration and professional development free of charge. Teachers from 34 Erasmus+ programme countries and 10 Erasmus+ partner countries are able to develop projects and take part in thematic discussion groups, webinars and other learning events, both online and on-site. Due to its range of online tools and services, eTwinning is well-placed to support a blended learning approach.

In the "eTwinning Live" restricted area, teachers can search for other registered eTwinners and schools, connect with them and follow their activities. Teachers can access all of the online and on-site events created by eTwinners, and can also create their own. Teachers can create their own projects and activities on different topics by collaborating with two or more teachers and their

⁸⁹ See the Erasmus+ homepage, available in different languages https://ec.europa.eu/programmes/erasmus-plus/node_en

⁹⁰ See the eTwinning platform, available in different languages <https://www.etwinning.net/en/pub/index.htm>

students. In the "TwinSpace", visible only to those participating in a specific project, teacher and students can meet and collaborate with peers from their partner schools.

EUROPEAN TOOLKIT FOR SCHOOLS

The online European Toolkit for Schools⁹¹ offers concrete ideas for improving collaboration within, between and beyond schools with a view to enabling all children and young people to succeed in school. School leaders, teachers, parents and other people involved in different aspects of school life can find helpful information, examples of measures and resource material to inspire their efforts in providing inclusive school education.

The Toolkit features a self-assessment questionnaire to help schools evaluate their current capacity and identify areas for improvement and contains a variety of resources, ranging from research studies, project reports, to specific examples of school practices, describing how each measure was successfully implemented. It has a particular focus on measures to prevent Early School Leaving, which can have a broader application to improving the SCHOOL CLIMATE AND COMMUNITY (1.2.7).

SELFIE – self-evaluation tool for schools

SELFIE (Self-reflection on Effective Learning by Fostering the use of Innovative Educational Technologies)⁹² is a tool designed to help schools embed digital technologies into teaching, learning and student assessment. It can highlight what is working well, where improvement is needed and what the priorities should be. The tool is currently available in the 24 official languages of the European Union with more languages to be added over time.

SELFIE gathers – anonymously – the views of students, teachers and school leaders on how technology is used in their school. This is done using short statements and questions and a simple 1-5 agreement scale. The statements cover areas such as leadership, infrastructure, teacher training and students' digital competence. Based on this input, the tool generates a report – a snapshot "selfie" – of a school's strengths and weaknesses in their use of digital technologies for teaching and learning. The report can help to start a conversation on technology use and develop an action plan for the school. SELFIE can then be used at a later stage to gauge progress and adapt the action plan.

As part of the new Digital Education Action Plan, more features are planned for the tool regarding online and blended learning.

ERASMUS+ PROJECTS

The following examples of **projects** supported by the Erasmus+ programme may provide inspiration for planning a blended learning approach in general and vocational schools.

⁹¹ <https://www.schooleducationgateway.eu/en/pub/resources/toolkitsforschools.htm>

⁹² https://ec.europa.eu/education/schools-go-digital_en

E-tools for E-schools (2015-2017) Bulgaria, Greece, Italy

The strategic partnership project *E-tools for E-schools*⁹³ between secondary schools tackled the gaps between available technologies and their use and application in teaching methods. The participating organisations applied a blended learning approach by combining online with face-to-face class activities. The partnership developed a Web TV and web-based LMS platform (Learning Management System)⁹⁴ for primary and secondary school teachers in order to facilitate the use of information and communication technologies in learning and teaching process. These platforms offer trainings for teachers on how to use the ICT tools at school and distance learning. Two complementary and mutually upgrading methodologies were used when creating the outputs – a distant learning methodology for the WebTV and a blended learning methodology for the web platform. An extensive e-learning methodology⁹⁵ was another relevant output, which may be used as a tool for designing blended learning courses.

“Blended learning in an international context” (2018-2019) Sweden

"Blended learning in an international context" was a mobility project⁹⁶ by the Stockholm Science and Innovation School (upper secondary) with the ambition is to be at the frontline of the digital development of schools in the city.⁹⁷ One of the aims for this project was to develop skills for flipped classroom and blended learning approaches. The school had recently started to use a new digital platform where teachers could construct and share course structure, including videos and assessment, solely on a digital platform. The introduction of the platform has led to pedagogical discussions between teachers and the school believes that a well-developed blended learning approach will lead to greater motivation and individualization for the students - which in turn will contribute to better learning outcomes.

Supporting 21st Century Teaching and Learning (2017-2019) Ireland, Netherlands, Slovenia

The mobility project *Supporting 21st Century Teaching and Learning*⁹⁸ explored the blended learning concept in secondary vocational schools, combining online and classroom-based activities to test the “flipped classroom” approach. The learner at home viewed short video lectures before the class session, while in-class time was devoted to exercises, projects, or discussions. The activities also incorporated the concept of ‘bring your own devices’ (BYOD), aiming to support, enhance, and transform the learning experience by using the pupils’ own familiar tools and improve the learning outcomes. Learners demonstrated improved digital skills and performance in problem solving and critical thinking tasks. The project supported Continual Professional Development by organising study visits for Senior Management, Principals, Deputy Principals and Head of Services, aiming to help them meet the changing education landscape and assist them in Leadership & Management Development.

⁹³ <https://ec.europa.eu/programmes/erasmus-plus/projects/eplplus-project-details/#project/2015-1-BG01-KA201-014219>

⁹⁴ <https://www.e-teachers.eu/>

⁹⁵ http://cei-bg.org/sites/default/files/EFES_METHODODOLOGY_NHMC_18%20APR_0.pdf

⁹⁶ <https://ec.europa.eu/programmes/erasmus-plus/projects/eplplus-project-details/#project/2018-1-SE01-KA101-038755>

⁹⁷ <https://stockholmscienceandinnovationschool.stockholm.se/>

⁹⁸ See <http://cityofdublin.etb.ie/latest-news/cdetb-examining-best-practice-in-teaching-and-learning/> and <https://ec.europa.eu/programmes/erasmus-plus/projects/eplplus-project-details/#project/2017-1-IE01-KA102-025597>

Geleceğin Sınıflarını Ters-Yüz Ediyoruz - ‘We Reverse the Classes of the Future’ (2015-2016) Turkey

This mobility project⁹⁹ applied a “flipped classroom” and compared it to a traditional learning process. The results of surveys and assessment showed better learning outcomes for pupils who experienced the flipped approach. The main objectives of the program were to support pupils to use technology outside of the school, manage their own learning, and be motivated and curious for seeking new knowledge. The project was founded on the understanding that pupils should not be merely passive receivers of information and the teacher is not the only source of knowledge; instead, teachers support students in becoming self-directed learners. Learners watched or listened to lectures at home, collaborated in online discussions, and carried out research at home before the class. They were thereby prepared to use the time in the classroom to solve problems and apply the new knowledge with the guidance of a mentor. The project included meetings in the school for teachers to disseminate the findings and share experiences. With support from every branch within the school to initiate good practices, teachers prepared e-content, webpages, and curricula.

“Exploring blended learning activities for VET – *Blend4VET*” (2016-2018) Estonia, Ireland, Netherlands, Spain, United Kingdom

The *Blend4VET* strategic partnership¹⁰⁰ project piloted a blended learning approach in order to effectively integrate technology into an existing course, with the aim of enhancing the teaching and learning experience for teachers and learners. The activities focused on moving a number of existing face-to-face courses to a blended online version over a two-year period to enhance access and provide learners with greater choice and flexibility in terms of what they learn and how they learn. The project developed a [BlendforVET Toolkit](https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2016-1-UK01-KA202-024636)¹⁰¹, which provides free educational resources and explains how blended learning can be delivered. This toolkit has been designed for new and more experienced tutors/teachers who wish to introduce or fine-tune a blended programme in their schools. The information gathered in this toolkit is based on the experience and research of the organisations participating in this project. More information can also be found on the project’s website¹⁰².

⁹⁹ <https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2015-1-TR01-KA101-017148>

¹⁰⁰ <https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2016-1-UK01-KA202-024636>.

¹⁰¹ <https://ec.europa.eu/programmes/erasmus-plus/project-result-content/dc4b2567-ea82-4095-a980-acd3c5516df6/Output%205%20Toolkit%20graphic%20designed.pdf>

¹⁰² <http://blend4vet.eu/>

