

# Blended Learning

## *State of the Nation*

Ebba Ossiannilsson

*Swedish Association for Distance Education, Kung Oscars Väg 27, Lund, Sweden*

**Keywords:** Access, Blended Learning, Digitization, Flipped Classroom, ICDE, SDG4, Sustainability Goals, 4<sup>th</sup> Industrial Revolution.

**Abstract:** Blended learning is accepted cross the globe in line with technological development and increased digitization. Blended learning designs have led the trends in higher education in the past five editions of the *NMC Horizon Report*, partly because of their flexibility, and convenience for students, although, it has been in use since the 1960's. The concept is time and context dependent. Blended learning involves learners, teachers, administrators, technicians, leaders, and managers, all with a variety of aspirations and ambitions. Blended learning is part of the innovative transformation of education in the 21st century, as blended learning embraces personal quality learning. This widely recognized and personalized method engages, facilitates, and supports learning. UNESCO and the Commonwealth of Learning emphasize this approach, as it makes learning more flexible and convenient. This will help students be part of a global digital society. The blended learning model requires changes in the roles of both teachers and learners. These changes are accompanied by shifts in ownership and empowerment, where learners become prosumers and orchestrate their own learning regarding time, space, setting, path, and pace. This paper is based on a report on blended learning, state of the nation, written by the author on behalf of ICDE.

## 1 INTRODUCTION

Blended learning designs have headed the list of trends in higher education the most recent five editions of the *NMC Horizon Report*, partly because of their role in increasing the flexibility and convenience of students (Adams et al., 2017). Briefly, blended learning is the fusion of online and face-to-face contact between teachers and students.

This position paper is based on the Insight paper authored by Ossiannilsson (2017) on behalf of the International Council for Open and Distance Education (ICDE). The purpose of that report was to contribute to the discussion of blended learning, particularly its development, implementation, effects, and relationship with the emerging trends outlined by the United Nations Educational, Scientific, and Culture Organization (UNESCO) global sustainable goals (SDG) for education in 2030 (UNESCO, 2015a 2015b). The report targets a broad audience, especially practitioners, policy makers and leaders. It provides awareness, inspiration, insights, and dialogues into blended learning and the current debates. The report explains that blended learning is

based on a pedagogical approach rather than on technology.

Blended learning is part of the innovative transformation of education in the 21st century. Blended learning involves people; as learners, teachers, administrators, technicians, leaders, and managers with a variety of aspirations and ambitions. Blended learning embraces personal quality learning. This widely recognized and personalized method engages, facilitates, and supports learning. UNESCO and the Commonwealth of Learning (COL), emphasize this approach, as it makes learning more flexible and convenient for the learners. This will help students to be part of a global digital society.

The blended learning model requires changes in the roles of both teachers and learners. These changes are accompanied by shifts in ownership and empowerment, where learners become prosumers (Mc Loughlin & Lee, 2008), and orchestra their own learning regarding time, space, setting, path, and pace.

## 2 METHOD

The study on blended learning, the state of the nation, was based on an international desktop review of the literature available on the Internet, which consisted of mainly open-source articles found on Google Scholar by using the Boolean search method. Most of the literature could be categorized into one or more of the following groupings; position papers by governmental organizations, such as UNESCO, Commonwealth of Learning (COL), the Organization for Economic Co-operation and Development (OECD), and the European Commission, scientific journals and books, unpublished papers, such as blog posts by researchers with international reputations.

## 3 FINDINGS

The findings from the desktop research was categorized in main headings, which each was elaborated, and discussed. Terminology, definitions, history, and etymology, as well as models and implementation, advantages, and disadvantages were considered as main headings. In addition, recommendations were given.

In this paper, the first section will cover blended learning, definitions, history and etymology. Then, models, implementation, and advantages, and disadvantages are briefly discussed, and some examples are presented. Last, conclusion and recommendations are given

### 3.1 Blended Learning

In most educational programs, the blended learning model is accepted cross the globe in line with technological development and increased digitization. Although, blended learning has been in use since the 1960's blended learning designs have led the trends in higher education in the past five editions of the *NMC Horizon Report*, partly because of their flexibility, and convenience for students (Adams et al., 2017).

Interpretations of the concept to blended learning have varied over time, and it has been defined variously worldwide. The term has been used since the advent of the Internet and the World Wide Web in the late 1990s. Although the concept was first developed in the 1960s, the formal terminology used to describe it did not take its current form until the late 1990s (Friesen, 2012).

In educational programs, both formal and informal, the use of the blended learning model is accepted as the mainstream approach to learning in schools, colleges, and universities across the globe in line with technological development and increased digitization (Bates, 2016; Christiansen et al., 2013; Christiansen Institute, 2015). Thus, the ecosystem of blended learning must be embraced to ensure the quality of a culture of blended learning (Ossiannilsson, 2017).

The term blended learning is commonly understood as referring to formal and classroom methods. Blended learning environments include not only the physical presence of teachers and students but also the students' ownership and control of the time, place, setting, path, and pace at which their learning takes place (Banditvilai, 2016; Bates, 2016; Bonk, 2006; Clark, 2003; Daniel, 2016; Friesen, 2012; Latchem, 2017). Blended learning concerns mindset and pedagogy more than it does technology (Adams, et al., 2017).

Blended learning is considering as learners centered, that offer flexibility, and ownership throughout the learning process. In short, the concept simply means the blend of virtual online digital media, training with traditional classroom methods, and face-to-face, instructor-led sessions.

The two most-often cited definitions are provided by the Christiansen Institute and Wikipedia. The former defined blended learning as:

[Blended learning is] a formal education program in which a student learns; at least in part through online delivery of content and instruction, with some element of student control over time, place, path, and/or pace; at least in part in a supervised brick-and mortar location away from home, and the modalities along each student's learning path within a course or subject are connected to provide an integrated learning experience (Christiansen, Horn & Staker, 2013 p.8).

The latter defined it as follows:

Blended learning is a formal education program in which a student learns at least in part through the delivery of content and instruct on via digital and online media with some element of student control over time, place, path, or pace. (Wikipedia, 2017).

The Commonwealth of Learning (COL) (2015), defined blended learning as an approach to teaching and learning that combines different methods, technologies, and resources to improve student learning. The Online Learning Consortium (OLC, 2015) defined blended and hybrid learning as online activities that supplemented by classroom meetings,

replacing a significant percentage of the required face-to-face instruction. In other words, most course activity is done online, but some face-to-face instruction is required, such as lectures, discussions, labs, and other in-person learning activities.

Because blended learning is highly context dependent, the concept has been interpreted and defined variously over time and in many cultural contexts. The terms blended learning, hybrid learning, technology-mediated instruction, technology-enabled (enhanced) learning, web-enhanced instruction, and mixed-mode instruction are often used interchangeably in the research literature (Bates, 2016, 2017; Commonwealth of Learning, 2015; Daniel, 2016). The term blended learning is sometimes synonymous with the terms personalized learning and differentiated instruction (Personalize Learning, 2012).

Blended learning can thus be described in terms of a continuum along which a series of variations in practice and thinking can be arranged. Friesen (2012), as well as Bates (2016) argues that blended learning can be placed between fully online and fully face-to-face courses. Below is an example of a common image of blended learning, which clearly shows the merge, of the brick and mortar model (classroom based), and the online learning model (computer based). It shows explicit how learning is more and more blurred in the variety of learning spaces.

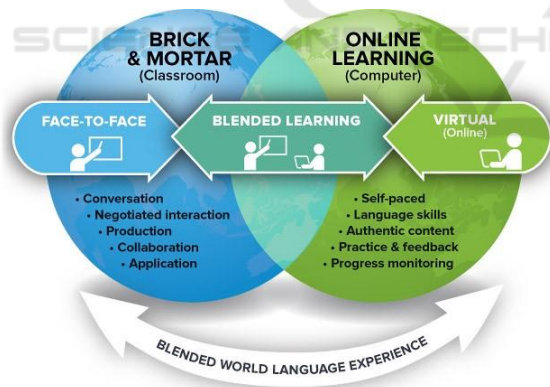


Figure 1: Blended learning, a common model.

### 3.2 Blended Learning, Models, and Implementation

Blended learning is advantageous for learners, teachers, and institutions if visions, strategies, infrastructure, qualitative blended learning design, capacity building, and teacher training are in place (Geissler, 2014). These advantages may be limited by the absence of attention of any of these factors.

To reach the UNESCO goals for education in 2030 (UNESCO 2015a 2015b), the practice of education has to change, transform, and innovate. The goal of education is to prepare students for an unknown and uncertain future and to prepare for jobs that do not yet exist. Therefore, there is a need to move beyond knowledge, and to recall focusing on the competencies and skills needed for lifelong learners and active global citizens, who will need to be flexible, entrepreneurial, collaborative, agile, and adaptable. Hence, today's students must harness the power of digital technologies and their social networks to support continued learning. Innovation must be an integral part of learning ethics to ensure that faculties, and institutions are agile in responding to the external market and associated factors. Educational institutions must not only adapt but also to take the lead in innovation and cutting-edge technologies to enhance learning spaces. Hence, Adam et al. (2017) prioritized the following for empowering, and successful implementation:

- Blended learning design
- Collaborative learning
- Growing focus on measuring learning
- Redesigning learning spaces
- Advancing cultures of innovation
- Deepening learning approaches

Banditvilai (2016) emphasized that a blended learning model could comprise several components, such as instructor-delivered content, e-learning, webinars, conference calls, live or online sessions with instructors, and other media and platforms', such as Facebook, e-mail, chatrooms, blogs, podcasting, Twitter, YouTube, Skype, and web boards.

The interactions or cross actions in digital spaces (Jahnke, 2016) have become more complex than ever. Humans are also more mobile than ever before, and doubly so, not only because they are constantly on the



Figure 2: The "blend" in the blended learning model.

move but also because almost everything can be accessed through mobile devices such as smartphones and tablets and the software applications (i.e., apps) that are designed to run on them (Sharples et al., 2016). In Figure 2 below the blend in blended learning is illustrated as by Mountain House High School, Mountain House, CA.

The iNACOL framework for online and blended learning, is a well-known identified model for successful implementation, and quality enhancement (Christiansen Institute, 2015; Christiansen, Horn & Staker, 2013; Powell, Rabbi & Kennedy, 2014), Figure 3. In the model 12 key competencies are identified that are combined into four larger domains. This framework emphasizes the mindsets, qualities, and skills that support practioners’ creative and continuous improvement as well as their ability to thrive amidst change. The framework is adapted from the TPACK model (Technology, People, Assessment, Content and Curricula), a framework for understanding quality online blended teaching and learning, which addresses all aspects of a student-centered, functional description of the key elements in an approach to systemic educational transformation.

The iNACOL framework emphasizes the mindsets, qualities, and skills that support practitioners. Efficient and effective learning starts with an effective mindset, which is one domain in the iNACOL framework for blended learning. This framework is one of the models studied by educators to understand their evolving role in blended learning environments. This framework offers insights in to the knowledge, skills, and dispositions needed to ensure that new instructional methods are successful.

**Framework for Blended Teaching Competencies**



Figure 3: The iNACOL framework for blended learning.

Porter and Graham (2016) proposed a three-stage framework for the institutional adoption of blended learning: 1) awareness and exploration; 2) adoption and early implementation; 3) mature implementation and growth. Their framework also identifies the key strategy, structure, and support issues that universities may address at each stage, which were emphasized by Ossiannilsson et al., (2015) in their recommendations for a quality model of open online learning.

The case studies of UNESCO Bangkok and the Education University of Hong Kong (2016) could be used as examples by institutional leaders and policymakers to implement and support blended learning based on current and future needs, particularly if they emphasized the following:

- In the process of implementing blended learning strategies, attention should be paid to learning inputs, processes, assessments and the measurement of overall personal development.
- In implementing a holistic approach, teachers and administrators should be well prepared, motivated, and have sufficient time and resources.
- To succeed, students need creative learning opportunities that include guidance by well-supported faculty in dynamic learning environments.
- Institutional leadership must be attuned to the needs of staff and students, as well as the need for an overall strategy to improve learning experiences both online and in person.

Two more models were described in the Insight paper, namely the open pedagogy model (Wiley, 2013), and mobile learning models. As they are more general pedagogic models, and truly well known, it will go too far ahead to describe them here in this paper. Instead another useful model, when it comes to maturity and purpose for implementing technology, or enhancing the quality in blended learning to be considered is the substitution, augmentation, modification, redefinition model (SAMR) by Puentedura (n.d) The model offers a method of determining the effects of computer technology on teaching and learning. The SAMR model also provides indicators of progress that adopters of educational technology often follow as they learn to use it in teaching and learning (see Figure 4).



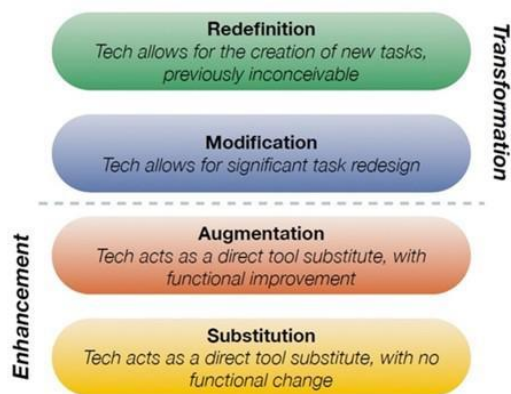


Figure 4: The SAMR model.

In the Insight paper on blended learning, models on quality, and quality enhancement also were elaborated, and models were discussed. In Ossiannilsson et al.'s (2015) study on quality models for open online learning, including blended learning, found that although the models had different features, dimensions, or categories, they all had some features in common, such as services, products, and management, and they all emphasized the student-centered approach, see Figure 4. One example of such a model was developed by the European Association of Distance Teaching Universities (EADTU) Excellence Associates Label (Kear at al., 2016). It is worth stressing the importance of leadership, management, incentives, and recognition in quality models. Ossiannilsson et al.'s findings included the importance of a holistic approach and an ecosystem.



Figure 5: Significant areas related to quality in open online learning including e-learning (Ossiannilsson, 2012, Ossiannilsson et al., 2015).

## 4 CONCLUSIONS AND RECOMMENDATIONS

The blended learning method is becoming increasingly common. Blended learning concerns mindset and pedagogy more than it does technology. More important than its technical definition is the

purpose of blended learning, specifically the reasons that its adoption as an instructional modality is important for the future of learning. Thus, the ecosystem of blended learning has to be embraced to cultivate a culture of quality in blended learning. Blended learning is a powerful method for differentiating and personalizing instruction, as well as for moving away from time based models of achievement toward competency-based ones.

Blending is a strategy that helps teachers achieve what they strive to do every day, to understand and enable each student to reach the very highest levels of educational mastery (Powell, Rabbi, & Kennedy, 2014). Blended learning not only requires teachers to understand and have deep knowledge in their areas of content expertise but also understand and use online and blended modes of pedagogy. The blended learning model requires changes in the roles of not only teachers but also learners who are active, responsible collaborators, and even creators of their own learning materials, as McLaughlin and Lee (2008) argued, learners are prosumers. This change in roles is accompanied by shifts in ownership and empowerment in which learners take control of and orchestrate their own learning.

In summary, the following recommendations were provided for the successful implementation and sustainability of culture of quality in blended learning.

1. Base success on people, that is, the human dimension.
2. Promote the ownership of learning by allowing personal learning.
3. Ensure that strategies, funding, and visions are understandable to all.
4. Implement a culture of smart learning, open pedagogy, and mobile learning.
5. Enable ubiquitous learning, time (any time), space (anywhere), path, mode, and access.
6. Apply the iNACOL framework of blended learning.
7. Apply the UNESCO Bangkok and the Education University of Hong Kong recommendations.
8. Support and facilitate capacity building, incentives, and recognition in all staff.
9. Cultivate a culture of quality and an ecology of blended learning.
10. Encompass digitization throughout the curricula and assessments, including finding, evaluating, creating, disseminating, and communicating.

11. Ensure that blended learning concerns all stakeholders at micro, - meso, - and macro levels.
12. Ensure that leadership and management at all levels support and facilitate the culture and quality of blended learning.
13. Conduct research that focuses on blended learning per se, not only in comparison with other teaching and learning models.

## ACKNOWLEDGEMENTS

The author would like to thank International Council for Open and Distance Education (ICDE) for the opportunity to author and contribute to their Insight paper, entitled Blended learning. State of the Nation.

## REFERENCES

- Adams Becker, S., Cummins, M., Davis, A., Freeman, A., Hall Giesinger, C., & Ananthanarayanan, V. (2017). NMC Horizon report: 2017 higher education edition. Austin, Texas: The New Media Consortium.
- Banditvilai, C. (2016). Enhancing students' languages skills through blended learning. *The Electronic Journal of e-Learning*, 14(3), 220–229.
- Bates, T. (2015). Teaching in a digital age: Guidelines for designing teaching and learning for a digital age. [Web log message]. Retrieved from <https://opentextbc.ca/teachinginadigitalage/>
- Bates, T. (2016, December 12). Re: Are you ready for blended learning? [Web log post]. Retrieved from <https://www.tonybates.ca/tag/blended-learning/>
- Bonk, C. J., & Graham, C. R. (2006). *The handbook of blended learning environments: Global perspectives, local designs*. San Francisco: Jossey- Bass/ Pfeifer.
- Christensen Institute (2015). Blended learning definitions. Retrieved from <https://www.christenseninstitute.org/blended-learning-definitions-and-models/>
- Christansen, C., Horn, M., & Staker, H. (2013). *Is K-12 blended learning disruptive? An introduction to the theory of hybrids*. Clayton Christensen's Institute for disruptive innovation.
- Clark, D. (2003). Blended learning: An EPIC whitepaper. Retrieved from <http://www.scribd.com/doc/84278560/Clark-D-Blended-Learning>
- Commonwealth of Learning. (2015). Open and distance learning: Key terms and definitions. Retrieved from [http://oasis.col.org/bitstream/handle/11599/829/Definitions\\_ODL%20key%20terms\\_20150522.pdf?sequence=4](http://oasis.col.org/bitstream/handle/11599/829/Definitions_ODL%20key%20terms_20150522.pdf?sequence=4)
- Commonwealth of Learning. (2017). *Connections*, 22,2.
- Daniel, J. (2016, February 24). Making sense of blended learning: Treasuring an older tradition or finding a better future? Contact North|Contact Nord Research Associate [Web log message]. Retrieved from <https://teachonline.ca/tools-trends/blended-learning-successful-design-delivery-and-student-engagement/making-sense-blended-learning-treasuring-older-tradition-or-finding-better-future>
- Friesen, N. (2012). Defining blended learning. Retrieved from [http://learningspaces.org/papers/Defining\\_Blended\\_Learning\\_NF.pdf](http://learningspaces.org/papers/Defining_Blended_Learning_NF.pdf)
- Geissler, N. (2014). Blended learning approaches to teacher training. UNESCO Mobile Week. Deutsche Gesellschaft für International Zusammenarbeit (GIZ) GmbH. Retrieved from <http://www.unesco.org/new/en/unesco/themes/icts/m4ed/unesco-mobile-learning-week-2014/symposium/breakout-sessions/blended-learning-approaches/>
- Horn, M., & Staker, H. (2014). *Blended: Using disruptive innovation to improve schools*. Christiansen Institute. San Francisco: Jossey-Bass.
- Jahnke, I. (2016). *Digital didactical designs: Teaching and learning in crossation spaces*. New York: Routledge.
- Kear, K., Rosewell, J, Williams, K. Ossiannilsson, E., Rodrigo, C., Sánchez, A., Paniagua, E., Santamaría Lancho, M., Vyt, A. & Harvey Mellar, H. (2016). Quality assessment for e-learning: A benchmarking approach. Eds: K. Kear and J. Rosewell. 3rd edition. Heerlen: The European Association of Distance Teaching Universities (EADTU).
- Latchem, C. (Ed.). (2017). *Using ICTs and blended learning in transforming TVET*. Burnaby: United Nations Educational, Scientific, and Cultural Organization (UNESCO). Retrieved from <http://unesdoc.unesco.org/images/0024/002474/247495e.pdf>
- McLoughlin, C., & Lee, M. (2008). The three Ps of pedagogy for the networked society: Personalization, participation, and productivity. *International Journal of Teaching and Learning in Higher Education*, 20(1), 10–27.
- OECD. (2016). *Education 2030: The future we want. The Future of Education and Skills: Education2030*. Retrieved from <http://www.oecd.org/edu/school/education-2030.htm>
- Online Learning Consortium. (2015). Updated e-learning definitions. Retrieved from <https://onlinelearningconsortium.org/updated-e-learning-definitions-2/>
- Ossiannilsson, E. (2017). *Blended learning. State of the nation*. Oslo: The International Council for Open and Distance Education
- Ossiannilsson, E., Williams, K., Camilleri, A., & Brown, M. (2015). *Quality models in online and open education around the globe: State of the art and recommendation. The ICDE report series*. Oslo: The International Council for Open and Distance Education.
- Personalize Learning. (2012, September24). Re: Blended learning is not the only way to personalize learning. [Web log message]. Retrieved from <http://www.personalizelearning.com/2012/09/blended-learning-is-not-only-way-to.html>
- Porter, W.W., & Graham, C. R. (2016). *Institutional drivers and barriers to faculty adoption of blended learning in*

- higher education. *British Journal of Educational Technology*, 47, 748–762. doi:10.1111/bjet.12269
- Powell, A., Rabbi, B., & Kennedy, K. (Eds.). (2014). *iNACOL blended learning teacher competency framework: iNACOL in partnership with The Learning Accelerator*. iNACOL, The International Association for K-12 Online Learning, Retrieved from <https://www.inacol.org/wp-content/uploads/2015/02/iNACOL-Blended-Learning-Teacher-Competency-Framework.pdf>
- Puentedura. (n.d.). *The SAMR Model: from Enhancement to Transformation*.
- Saritepeci, M., & Cakir, H. (2015). The effect of blended learning environments on student motivation and student engagement: A study on social studies course. *Education and Science*, 40(177), 203–216.
- Sharples, M., de Roock, R., Ferguson, R., Gaved, M., Herodotou, C., Koh, E., Kukulska-Hulme, A.,... Wong, L. H. (2016). *Innovating pedagogy 2016: Open University innovation report 5*. Milton Keynes: The Open University.
- Schwab, K. (2016). *The 4th industrial revolution*. Geneva: World Economic Forum.
- UNESCO. (2015a). *Education 2030 Framework for Action: Towards inclusive and equitable quality education and lifelong learning for all*. Paris: UNESCO.
- UNESCO. (2015b). *UNESCO and Education 2030: Framework for action and sustainability development goals 4, SDG4*. Retrieved from <http://en.unesco.org/sdgs>
- UNESCO. (2016). *Blended learning for quality in higher education: Selected case studies on implementation in the Asia-Pacific*. Lim, Cher Ping, & Libing Wang (Eds.). Paris: United Nations Educational, Scientific, and Cultural Organization. Retrieved from <http://unesdoc.unesco.org/images/0024/002468/246851E.pdf>
- Wiley, D. (2013, October 21). *What is open pedagogy?* [Web log message]. Retrieved from <https://opencontent.org/blog/archives/2975>
- Wikipedia (2015a). *Blended learning*. Retrieved from [https://en.wikipedia.org/wiki/Blended\\_learning](https://en.wikipedia.org/wiki/Blended_learning)