Online Adult Education for Sustainable Development: The Analysis of the Consequences of the Covid-19 Pandemic in Latvia

Inga Jekabsone and Ina Gudele
“Magnetic Professional” Ltd, Riga, Latvia

Abstract

The Covid-19 pandemic has left significant consequences at every level of education, including adult education. In order to adapt to the restriction caused by the pandemic, adult education institutions all around the world were forced to transform the way how the educational process was being organized. By introducing various web-related technologies, the physical place of teaching and learning processes has become a less significant factor, thereby, potentially, contributing to the inclusiveness of education and, as a result, to sustainable development.

The paper aims to analyze how the recent transformation of adult education caused by the pandemic between 2020 and 2022 contributed to the sustainable development of Latvia.

To achieve the aim, the following research methods are used: a scientific literature review to investigate the concepts of sustainable development and online adult education as well as their potential correlation, a survey of adult education institutions in Latvia, as well as statistical data analysis of adult education indicators.

The main findings of the article: during the pandemic when the in-person teaching process was restricted, the Latvian adult education sector experienced unprecedented digital transformation. The transformation positively contributed to the improvement of not only the digital skills of teachers and learners but also to the sustainable development of Latvia by facilitating access to potential learners living in rural areas and regions.

Keywords: Adult education, digital transformation, Latvia, online learning, sustainable development, sustainable education.

Introduction

The educational system has been significantly impacted by the Covid-19 pandemic. In the period from 2020 until 2022, the majority of teaching and learning – including in the adult education field – was conducted online due to various restrictions. Worldwide adult education institutions were compelled to switch to an online teaching environment, which led to an industry-wide unprecedented rapid digitalization.
In the case of Latvia, adult education institutions were required to move to a distance format in March 2020. Later, in November 2020, the Ministry of Education and Science of the Republic of Latvia recognized the benefits of distance learning by establishing in the Education Law of Latvia that full-time educational programs might contain a component of remote learning (see Section 1 (12) of (Latvijas Vēstnesis, 1998)). By introducing this legal norm, the whole notion of learning has changed, thereby promoting the development of various distance learning models and using web-related (online) technologies during the teaching and learning processes.

Considering the aforementioned, the authors have formulated the following research question: How has the recent digitalization in adult education caused by the pandemic between 2020 and 2022 contributed to the sustainable development of Latvia?

The aim of the study is to analyze how the recent transformation of adult education caused by the pandemic between 2020 and 2022 contributed to the sustainable development of Latvia.

In order to achieve this aim, the authors have formulated the following tasks:

1. to review the concept of online adult education and its relation to sustainable development;
2. to examine the policy planning documents of Latvia in light of how education can contribute to sustainable development;
3. to analyze the results of the survey of Latvian adult education institutions in the context of digital transformation of adult education and its potential contribution to sustainable development.

Within the paper, the authors conduct a scientific literature review to analyze the most recent studies of academic scholars about online adult education and its potential contribution to sustainable development.

As regards primary data for the research, in May and June 2021, the authors conducted a survey of educational institutions that provide adult education programs in Latvia. The State Education Development Agency, the Latvian Adult Education Association, the Ministry of Education and Science of the Republic of Latvia, as well as other social partners, collaborated on the development of the questionnaire. 60 educational institutions participated in the survey overall, although only 43 finished the questionnaire in its entirety. At the time of the survey, 100 adult education institutions were all registered in the Registry of Education Institutions.

While analyzing these primary data (see more in other authors’ publications (Jekabsone & Gudele, 2021a; Jekabsone & Gudele, 2021b), the authors concluded that the pandemic has had a significant impact on the adult education sector in Latvia. However, the potential contribution to the sustainable development of Latvia has not been analyzed yet.

In order to provide an overview of online adult education and its relation to sustainable development, the authors analyze statistical data on adult education indicators in Latvia.
The Concepts of Online Adult Education and Sustainable Development: Scientific Literature Review

The scientific literature review has revealed that there are various concepts that refer to the educational process where web-related technologies are being used. Despite the inconsistency in using various terms and descriptions of learning environments (see more in Moore et al., 2011), the authors have summarized the main concepts used in the scientific literature to refer to the educational process where web-related technologies play a significant role:

- **Distance learning** – it is a general concept ("umbrella" concept) that refers to the learning process that is held at different times or places, and uses varying forms of instructional materials (Moore et al., 2011);
- **Online learning** – it is a concept that refers to the most recent version of distance learning which improves access to educational opportunities for learners using various web-related technologies (Conrad, 2002) to ensure interaction among students and/or teachers and to enhance learning and interactivity in the synchronous or asynchronous environment (Singh & Thurman, 2019);
- **E-learning** – it is a concept that appeared in the 1980s and is considered a form of online learning when learning opportunity is provided using various applications, programs, objects, and websites (Triacca et al., 2004);
- **Remote learning** – is a concept that refers to a temporary shift of instructional delivery to an alternate delivery model due to crisis circumstances (Hodges et al., 2020).

Furthermore, it is also necessary to explain the difference between online and remote learning. The academic debate about these concepts became topical during the pandemic in the context of the transition of the teaching process. Remote learning refers more to crisis or emergency situations (concept “emergency remote teaching”) (Ferri et al., 2020). It is a temporary shift of instructional delivery to an alternate delivery model due to crisis circumstances; while online education is planned distance education from the beginning using relevant teaching methods (Hodges et al., 2020).

Within this paper, the authors analyze the transformation of the adult education sector from a long-term perspective, thereby referring to the concept of online learning. In order to examine the potential contribution of online adult education to sustainable development, the authors provide a brief overview of the concept of sustainable development.

In general, the concept of sustainable development refers to “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”, and it first appeared in the academic debate in 1987, after the United Nations Brundtland Commission defined the concept of sustainability (World Commission on Environment and Sustainable Development, 1987). Over the time, this concept has become topical referring to various aspects of sustainable development such as economic, social, environmental as well as human development (Agbedahin, 2019), responsible citizenship (Alam, 2022) and educational (e.g., Bai & Sarkis, 2014).

Recent bibliometric research shows that the main focus for studies in the area of “education for sustainable development” is related to topics such as environmental education, teaching and learning, policy, real-world learning opportunities, sustainability competencies, resilience thinking, integrating sustainability, interdisciplinarity, teacher
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education (Grosseck et al., 2019). In this context, special concern should be devoted to the incorporation of sustainability into the curriculum. According to Salote et al. (2021), a key to furthering the development of ideas on the phenomenon of sustainability, sustainable education, and sustainable development is the significance of incorporating sustainability “content” into curricula by embracing methodologies that support value education and the development of critical thinking skills in education.

As regards the interconnections between education and sustainable development, it is described as “complex and manifold in their interrelation” (Rieckman, 2018) and it is no longer just a matter related to teaching and learning.

As regards scientific publications where recent technological developments in education are analyzed in the context of sustainable development, attention is paid to various technologies that promote inclusive education like artificial intelligence (Pedro et al., 2019) and e-platforms (Zhang et al., 2020).

Another aspect in this context is rising the competencies of teachers and learners during online education (Cebrian et al., 2020; Ferguson et al., 2021). It is stressed that not all teachers are ready to deliver online courses of high quality as well as not all learners are ready to learn online due to digital skills and other factors. Mirke et al. (2019) argue that online courses should be customized taking into consideration learners’ sociodemographic parameters and online readiness rate which should be assessed by filling a self-evaluation survey prior to enrolling on the course.

In addition, online teaching and learning aimed at sustainable development should involve various practices of active learning (Howell, 2021). Moreover, Jurs and Spehte (2021) argue that meaningful feedback in the distance learning process refers to sustainable developments as it provides dialogue, more responsibility for learning achievements and, in general, more qualitative education.

Another aspect in the light of education for sustainability is the engagement of stakeholders in the educational process (Glavić, 2020). Adefila et al. (2021) stress that during the educational process for sustainable development, various virtual learning tools and digital technologies should be used to bring together various stakeholders for collaborative learning.

As regards future research in the context of education for sustainable development, Gavinolla et al. (2022) concluded that future research should focus on various modern tools and techniques to achieve the goal of sustainable development as current studies show that this field of study is still evolving.

In the authors’ opinion, one of the main prerequisites for sustainable development is a high quality of education, including online adult education (this aspect is reflected by the UN declared 4th sustainable goal discussed in the next chapter). The literature review showed that there is a lack of studies that analyze the importance of the quality of education for sustainable development. Yoo and Jeon (2022) argue that there are very few studies that examine educational practices such as quality in promotion of the sustainable development goals. In this context, the teachers’ training and professional qualification become key elements for sustainability. This aspect is also highlighted by Brandisauksiene et al. (2020) and Koskela and Karkkainen (2021). Due to the pandemic-dictated restrictions, teachers were forced to transform the content of their courses online. In these circumstances, previously developed practices for quality monitoring may not cover online components of adult education programs. Thereby, future research should also focus on quality assurance system in the digital age.
The Concepts of Online Adult Education and Sustainable Development: Analysis of Policy Planning Documents in Latvia

In the case of Latvia, the goal of ensuring access to quality lifelong education is stipulated in the Sustainable Development Strategy of Latvia until 2030, which is the main long-term planning document (State Chancellery, 2010). Within this policy planning document, the concepts and principles of the United Nations (UN) Millennium Development Goals for 2015 (United Nations, 2000) (followed by the UN resolution “Transforming Our World: the 2030 Agenda for Sustainable Development”, including No 4 “Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” (United Nations, 2015)) were incorporated.

Figure 1

Incorporation of the Concepts of Sustainable Development and Education in the Sustainable Development Strategy of Latvia Until 2030

Source: Developed by the authors based on State Chancellery (2010).

As can be seen in Figure 1, the Sustainable Development Strategy of Latvia until 2030 contains various aspects of sustainable education such as inclusiveness, equitable quality, lifelong learning and cooperation with various stakeholders. In light of online adult education, the strategy stresses the importance of ICT during the educational process providing learners with access to education at various stages of life, also taking into consideration the current monocentric development of Latvia. It is recognized the digitalization of education may contribute to the openness of education, thereby ensuring the sustainable development of Latvia.

In order to implement the Sustainable Development Strategy of Latvia until 2030, the Ministry of Education and Science of Latvia developed the Guidelines for the Development of Education 2021–2027, which is a medium-term planning document. According to the guidelines, the main challenges to adult education in Latvia in the context of sustainable development are the following:
- Low learning motivation and involvement of all parties in adult education;
- Lack of skills required in the labour market;
- Insufficient digital skills in society;
- Incomplete data management and quality management of education at the level of educational institutions and the national level (Latvijas Vēstnesis, 2021a).

In order to overcome defined challenges, the overarching goal of education development for 2021–2027 is to provide quality educational opportunities for all residents of Latvia in order to promote the development and realisation of their potential throughout their lives and to develop their ability to change and responsibly manage constant changes in society and the economy (Latvijas Vēstnesis, 2021a). It can be concluded that adult education has an important role to play to ensure this strategic goal that is related to the sustainable development of Latvia as it is stressed that education has to be available to everyone throughout life for the transformation of society and the economy.

Another medium-term policy planning document where the concepts of adult education and sustainable development in light of ICT are discussed is the Guidelines for the Digital Transformation 2021–2027 developed by the Ministry of Environmental Protection and Regional Development of Latvia. The guidelines stress the importance of the development of digital skills in education, especially in adult education. In addition, the guidelines define the vision where digital skills and education provide opportunities for every resident of Latvia to fully use the possibilities of digital space, tools and related processes, thus contributing to the increase of general well-being (Latvijas Vēstnesis, 2021b). Furthermore, the policy document also emphasizes the importance of the digital skills of teachers to create digital learning content for high-quality implementation of distance learning.

**Figure 2**

**Interconnections Among Sustainable Development, Adult Education and Web-enabled Technologies in the Medium-Term Policy Planning Documents**

![Figure 2](image-url)

Source: Developed by the authors based on Latvijas Vēstnesis (2021a) and Latvijas Vēstnesis (2021b).

Figure 2 represents the interconnections among the concepts of sustainable development, adult education and web-facilitated technologies discussed in both examined guidelines (Guidelines for the Development of Education 2021–2027 and Guidelines for the...
Digital Transformation 2021–2027). The authors conclude that in the analysed policy planning documents, there are enough references for online adult education that has the potential to contribute to the sustainable development of Latvia. At the same time, the policy planners stress that the main attention should be paid to the quality of adult education, namely, an effective quality monitoring system should be developed, various activities towards the development of teachers’ competencies initiated as well as links to the labour market ensured.

Moreover, in the context of online teaching and learning processes, the policy planning documents stress the importance of the digital skills of teachers, digital technology-enabled learning methods and pedagogical digital competence of teachers.

The Concepts of Online Adult Education and Sustainable Development: Analysis of Survey Results of Latvian Adult Education Institutions

During the research, 60 Latvian adult education institutions were surveyed. The aim of the research was to analyze the overall consequences of the Covid-19 pandemic on the adult education sector in Latvia. The research period was May and June 2021 when adult education institutions for more than a year experienced various restrictions on gatherings.

First, to identify the changes in teaching and learning processes before and after the pandemic restrictions, Latvian adult education institutions were asked about the use of online technologies. Since the technology of online learning may be used in different educational settings, (traditional, web-facilitated, blended or hybrid and fully online), the surveyed institutions were asked to indicate all used types (see Table 1).

Table 1
Types of Online Learning and Their Application in Adult Education in Latvia

<table>
<thead>
<tr>
<th>The proportion of content delivered online, %</th>
<th>Type of course</th>
<th>Description</th>
<th>Situation in Latvia before the pandemic, share of adult education institutions, %</th>
<th>Situation in Latvia during the pandemic, share of adult education institutions, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Traditional</td>
<td>Traditional face-to-face learning with no significant use of web-based technologies</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>1–19</td>
<td>Web-facilitated</td>
<td>The course uses web-based technology to facilitate what is essentially a face-to-face course</td>
<td>82</td>
<td>12</td>
</tr>
<tr>
<td>20–79</td>
<td>Blended or hybrid</td>
<td>The course blends online and face-to-face delivery</td>
<td>8</td>
<td>30</td>
</tr>
<tr>
<td>80–100</td>
<td>Fully online</td>
<td>A course in which most or all of the content is delivered online</td>
<td>2</td>
<td>92</td>
</tr>
</tbody>
</table>

*60 adult education institutions were surveyed in May–June 2021; multi-select multiple choice question.

** Authors’ created table using (Allen & Seaman, 2009) and survey results.
Before the pandemic, most frequently the courses were conducted in a web-facilitated form when the e-platform was available for students. At the same time, 20% of adult education institutions admitted that courses were delivered in a traditional face-to-face model when no additional web-facilitated tools were provided. During the period of restrictions in May–June 2021, the courses were organized mostly in a fully online format (92% of all surveyed adult education institutions).

The results of the survey of adult education institutions showed that before the pandemic 35% of all institutions offered partly or fully online courses. At the same time, during the pandemic, 89% of the adult education institutions admitted that they would intend to offer partly or fully online courses in the future when any Covid-19-related restrictions were to be cancelled (Jekabsone & Gudele, 2021a).

In addition, the respondents were asked to access the benefits and challenges related to the technological dimension (see Figures 3 and 4). The most important challenge related to technology was the availability and functionality of IT equipment for learners (mean = 3.6). At the same time, the availability and functionality of IT equipment at educational institutions was assessed as the less important challenge (mean = 2.5). Also, the low level of learners’ digital skills (mean = 3.4) was identified as a problematic aspect to organize fully online learning process. As regards the digital skills of teachers, adult education institutions admitted that it was not a significant challenge (mean = 2.8). Finally, especially at the beginning of the pandemic, when adult educational institutions were forced to transform the way how the educational process was organized, it was challenging to ensure the functionality of the e-platform (mean = 3.1).

Figure 3

Main Technology-Related Challenges of Adult Education Institutions in Latvia During the Pandemic

* n = 43, research period May–June 2021; “1” corresponds to not important at all and “5” corresponds to an extremely important challenge

As regards the technology-related benefits, the main advantage is related to the development of digital skills of teachers, since they improved their competencies during the online teaching process, e.g., in reaching learning results in various settings by using
web-related technologies and tools. In addition, the adult education institutions recognized the opportunity to expand the target audience, including potential learners from rural areas, regions of Latvia and abroad. This factor can be directly related to sustainable development as adult education is more inclusive thanks to web-related technologies. In addition, web-related technologies also allow the creation of larger groups and by using various pedagogical techniques achieve optimal learning outcomes.

**Figure 4**

*The Main Technology-Related Benefits of Adult Education Institutions in Latvia During the Pandemic*

![Diagram showing the main technology-related benefits of adult education institutions in Latvia during the pandemic.](image)

*n = 43, research period May–June 2021; “1” corresponds to not important at all and “5” corresponds to an extremely important benefit*

Finally, to support the authors’ assumption that the digital transformation of the adult education sector contributed to sustainable development in Latvia, the authors analyzed the data on the participation rate in adult education in Latvia (see Figure 5).

**Figure 5**

*Participation Rate in Adult Education (last 4 weeks) in Latvia and EU 2012–2022 (% from the population) (Official Statistics of Latvia, 2023; Eurostat, 2023)*

![Graph showing the participation rate in adult education in Latvia and EU 2012–2022.](image)
As can be seen in Figure 5, the participation rate in adult education in 2021 when most of the courses were conducted partly or fully online increased to 8.6 % compared to 7.4 % in 2019. The data for 2022 show that the growing tendency continues reaching 9.7 %, thereby achieving the highest level of participation since records began (Official Statistics of Latvia, 2023). The drop in numbers in 2020, when the pandemic started, could be explained by the transition period for adult education institutions to offer courses taking into consideration restrictions as well as support measures implemented by the Ministry of Education and Science of the Republic of Latvia to promote the transformation of the educational process to online mode.

It can be concluded that in the case of Latvia, the Covid-19 pandemic promoted the use of web-facilitated technologies in adult education which might positively affect access to education, thereby contributing to the sustainable development of Latvia. However, this assumption should be tested by conducting additional quantitative and qualitative research, since there might be various factors that could have contributed to higher participation rates. In addition, the quality of education which is one of the key aspects of sustainable development is not considered.

Conclusions

The research showed that the adult education sector, including in Latvia, experienced rapid digitalization in the period from 2020 until 2022 since adult education centers were forced to adapt their operating strategy and offer online learning due to restrictions caused by the pandemic.

The scientific literature review reveals that there are complex interconnections between online education and sustainable development. Mainly, it is argued that online learning contributes to equality and more inclusive education. At the same time, not all adults are ready or willing to learn online because of a lack of digital skills, technological equipment or other reasons; therefore, the online form of adult education may increase inequality in acquiring education. In the context of sustainability, teachers while planning online adult education programs should focus on how to ensure collaborative learning, meaningful feedback and the development of critical thinking skills. Finally, more focus should be paid to increasing the competencies of teachers in order to ensure qualitative online teaching and learning processes, including online, as quality education directly contributes to sustainable development.

In light of how online adult education may support sustainable development, an analysis of Latvia’s long- and medium-term policy planning documents has revealed that both concepts are interconnected and that this is emphasized through inclusivity, equitable quality, lifelong learning, and collaboration with various stakeholders. Since the mid-term policy planning documents were created during the pandemic, the digitalization of adult education was designated as a horizontal priority, paying particular attention to teachers’ digital skills, their pedagogical digital competence, and learning techniques enabled by technology.

Finally, the results of the survey of Latvian adult education institutions clearly demonstrate the rapid digitalization of the adult education sector during the pandemic. While analyzing the technology-related challenges and benefits during the pandemic, the authors concluded that during the digitalization process, all involved parties, inc. teachers, improved their digital skills by using various tools and techniques in teaching
and learning processes. In addition, by introducing online programs, adult education centers were able to attract more learners and expand their target audience (e.g., from rural territories, different regions or from abroad). All these aspects lead to Latvia’s unprecedented high participation rate in adult education. However, there are not enough data to support the assumption that online adult education correlates to sustainable development since various aspects of sustainability (e.g., quality) need to be considered. As regards future research, a broader quantitative and qualitative study should be conducted including other EU countries to analyze whether the pandemic has contributed to higher participation rates in adult education, thereby supporting the hypothesis that online adult education promotes sustainable development through a more inclusive educational process. At the same time, in the research, the practices of quality assurance systems in online adult education programs need to be examined.

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Correspondence concerning this paper should be addressed to Dr. Inga Jekabsone.
Email: jekabsone47@gmail.com