

REIMAGINE EDUCATION WITH THE LEARNING PASSPORT PLATFORM THE CASE OF KOSOVO



ACKNOWLEDGMENTS

This Case Study was planned and conducted by the United Nations Children's Fund (UNICEF) Kosovo¹ Office, under the overall management of Teuta Halimi, Child Rights Monitoring Specialist, with the support of Kozeta Imami, Education Specialist. UNICEF officers Arjeta Gjickolli, Arta Haliti, Dita Dobranja, Fiona Kelmendi and Timur Ramiqi were all involved in consolidating information and data collection. The Case Study report was authored by Laetitia Antonowicz (UNICEF Consultant).

Special thanks go to Murat Sahin, Head of UNICEF Kosovo Office and Larissa Bruun, Deputy Head of UNICEF Kosovo Office for their inputs and support throughout the process. The team would like to also thank, Sarah Fuller, Education Consultant at UNICEF Europe and Central Asia Regional Office (ECARO) for her valuable inputs and to Albert Aliu, for technology related inputs.

Lastly, our deepest gratitude goes to all the project team members and respondents from the Ministry of Education and Science of Kosovo, municipality representatives, teachers, school directors, students, young people consulted for this case study, UNICEF Headquarters, UNICEF ECARO, Global CT Digital Kosovo, as well as UNICEF officers from Montenegro, Kyrgyzstan, and Tajikistan for their participation in the learning sharing workshop.

¹ All references to Kosovo shall be understood in the context of UN Security Council Resolution 1244 (1999).

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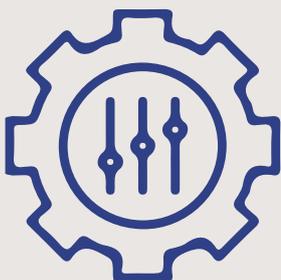
EXECUTIVE SUMMARY

This case study provides an overview of the development and early stage of implementation of shkollat.org, Kosovo's national blended learning platform. It offers a valuable example of how existing technology, materials and reform initiatives can be integrated to provide a national blended learning platform to support learning during and beyond the pandemic.

Kosovo ranked 3rd from bottom in PISA 2018 and access to education and learning are marked by significant educational disparities across urban and rural areas, ethnic groups and socio-economic background. When the pandemic hit, there was no national distance learning system in place. Internet penetration and mobile telephony connectivity was however high. Existing platforms were used to ensure some learning continuity during school closures, including public television, YouTube, and local-level solutions.

As part of UNICEF's pandemic response, the previously developed Learning Passport platform for migrant, refugee and displaced children was expanded to selected countries outside these contexts to mitigate learning loss. Kosovo launched the Learning Passport platform in April 2020, and over the course of the following year this was integrated into the new national platform, shkollat.org, which was combined with Microsoft Office 365 and Teams for Education and launched in February 2021.

The methodology for this case study used the established administrative subdivisions of the Kosovo education system – central, municipality, school – as units of analysis, and informants were selected from among stakeholders at each of these levels. Data collection took a mixed approach and included a desk review, semi-structured interviews, surveys and focus groups, depending on the type of stakeholder consulted, and was integrated with other data collection processes not directly linked to this case study. The timing of the research does not enable to report on usage and take up of the platform. The methodology examined four key areas:



- ◆ **Customising Learning Passport** for relevance beyond its original context.
- ◆ **Ensuring the platform works** for and reaches all, both students and teachers.
- ◆ **Institutionalising the solution** in a changeable political context, to ensure ownership at all levels and enable future development.
- ◆ **Ensuring transferability of lessons** from this context to that of other countries.

[Shkollat.org](https://shkollat.org) is the result of integrating existing digital and blended learning materials and platforms with interactivity provided by licensed commercial meeting and collaboration software. The Learning Passport platform enabled young people to access skills development materials, but in the pandemic situation the absence of interactivity of the platform became a pressing issue for formal education teachers and students. [Shkollat.org](https://shkollat.org) itself predates the pandemic, having been established in late 2019 as a hub to distribute licenses for Microsoft Office 365 to all education staff and students across Kosovo. Negotiation and consultation with Microsoft allowed the agreement of contractual and technical solutions to integrate the Learning Passport content with the shkollat.org platform, thus tackling the dual challenges of remote learning during the pandemic, and long term digitisation of the education system for better learning outcomes. [Shkollat.org](https://shkollat.org) allows every teacher and student access to software and materials repository via a unique user profile. At present, the platform can accommodate up to 115,000 simultaneous users.

[Shkollat.org](https://shkollat.org) was envisioned as a free-of-charge, one-stop service for digital education and skills development. The vision encompasses materials provision and development, interactive learning and progress monitoring, and information sharing and communication across all education stakeholders from government and schools to students, youth and parents. As such it was aligned with existing Education Ministry plans and became a key part of the national digital education strategy which was under development during implementation.

Accessibility to all was understood as encompassing registration via email or by mobile phone number, materials available in multiple languages, and materials targeting both formal education students and skills development for young people. Device and connection availability is a key access barrier, both for schools and students, and the vision included leveraging existing partnerships for device provision, plus future fund mobilisation under the forthcoming national digital education strategy.

Realising the potential of shkollat.org requires take-up by end users and long-term political and financial commitment from government. The development of a shared multi-stakeholder vision was followed by work from UNICEF to ensure buy-in from both central and local governments. The local level was especially important in the Kosovo context as some municipalities had already begun using their own digital learning solutions prior to the establishment of shkollat.org. To engage teachers, UNICEF supported training events on usage of the platform and software. While the training was successful, prior experience of remote teaching among participants was low, and surveys identified a need for ongoing capacity building in this area. For students, video tutorials on usage were made available and a need was identified to explore further avenues to support student engagement with the platform.

Following a successful start the challenge is now to expand and accelerate take-up and use. The first part of this process is to embed shkollat.org as a central part of the education reform process as a whole, covering many aspects from training, accessibility and content creation to normative framework integration and technical improvement. Secondly, results should be demonstrated – UNICEF is supporting training and digital infrastructure investment in target localities to this end. Thirdly, UNICEF will add value by leveraging partnerships for scale-up among donors and both public and private sector stakeholders. Fourthly, monitoring should be integrated so as to generate rigorous evidence on the outcomes of the rollout, which will feed back into planning a future funds mobilisation.

Valuable lessons have been learned from the challenges encountered and overcome by this ambitious, national-level programme.



- ◆ **Ensuring broad stakeholder buy-in** at the visioning stage and alignment with existing national and education needs and strategies.
- ◆ **Leveraging the availability** of existing learning materials and existence of strong and flexible local technical partners.
- ◆ **Planning realistically**, as technical issues can have knock-on effects and consume a good deal of time.
- ◆ **Identifying and understanding local needs**, access technical support, and digitise/standardise learning materials requires time and ongoing support, even when those are subcontracted.
- ◆ This programme has allowed many technical issues to be solved, including on the **Learning Passport platform**, so that this know-how can be passed on to future cases.
- ◆ **Embarking on a programme** of this size requires flexibility and both a dedicated multi-stakeholder project team, and buy-in from ministry technical staff, whose workloads are likely to increase.
- ◆ **Finally**, future national policy planning around an e-learning platform of this type should take into account ongoing teacher training, funds mobilisation for digital infrastructure and device provision, accessibility for those with disabilities, and crucially, data security and privacy, given the large number of users and sensitive educational information stored.



INTRODUCTION

This case study is a snapshot of the early stage of deployment and implementation of shkollat.org, Kosovo's national e-learning platform, which means "schools" in Albanian.

[Shkollat.org](https://shkollat.org) is the first step in efforts to support the digital transformation of education and aims to reach all children and young people in Kosovo, whoever they are and wherever they are.

[Shkollat.org](https://shkollat.org) enables teachers, schools and other educators to harness the potential of blended learning so that Kosovo can fully rise to the challenges of providing inclusive quality education and of improving learning outcomes and skills development for all children and young people beyond the pandemic.

The case study is particularly aimed at governments, Ministries of Education and UNICEF Offices in countries that have embarked on the development of a national platform to deliver blended learning during and beyond the pandemic.

After a brief section on the Kosovo country context and UNICEF's response to the pandemic in the education sector, this report presents the vision for the platform, an overview of current functionality, implementation steps, challenges and key lessons learned.

Definition of blended learning

"Structured opportunities to learn which use more than one teaching or training method, inside or outside the classroom, through which at least part of the content is delivered online. This definition includes different learning or instructional methods (lecture, discussion, guided practice, reading, games, case study, simulation), different delivery methods (face-to-face or computer mediated), different scheduling (synchronous or asynchronous) and different levels of guidance (individual, instructor or expert led, or group/social learning)"

Source: UNESCO's International Bureau of Education (n.d)



KOSOVO CONTEXT

Kosovo has high levels of poverty, inactivity and unemployment rates and is characterised by a volatile political environment with frequent changes of government. It is one of the poorest places in Europe with a child poverty headcount of 23% (UNICEF, 2019).

MICS 2020 data shows a Net Attendance Ratio (adjusted) of 95.5% for primary school age children, 93.9% for lower secondary school age children and 83.5% for upper secondary school age children (Kosovo Agency for Statistics and UNICEF, 2020).

The proportion of school age children out of school is 2.1% for primary school age children, 2.7% for lower secondary school age children and 9.5% for upper secondary school age children (Kosovo Agency for Statistics and UNICEF, 2020).

This education data masks disparities between urban and rural areas, wealth quintiles and significant disparities between the majority population and Roma, Ashkali and Egyptian children.

In 2018, Kosovo ranked third from bottom in PISA, with more than three in four 15-year-old students not reaching minimum proficiency in reading, math, or science. This means that over 78% of 15-year-olds in Kosovo were functionally illiterate as they performed below Level 2 in PISA reading proficiency (The World Bank Group, 2020). According to MICS 2020 data, less than half of children aged 7 to 14 years old demonstrate foundational skills in reading and numeracy (respectively 41% and 42%).

Low learning outcomes (compared to other PISA participating countries and the OECD average) negatively impact school to work transition for young people and exacerbate the mismatch between education, the labour market and employment. Young people face significant challenges in school to work transition. The proportion of 15-year-olds Not in Employment, Education or Training (NEET) is 37.7% and the unemployment rate for youth is 46.9%, with significant gender disparities for the latter with 61% unemployment rate for young women (Kosovo Agency of Statistics, 2020). This situation increases the risk of young people being



Gross National Income per capita:

4640 US\$ (2020)

Human Development Index: 0.739

Poverty Rate: 17.6% (2015)

Source: World Bank Data Centre

Unemployment rate (2020): 24.6% (F:33.1%, M: 21.5%)

Inactivity rate (2010): 60% (F:78.5%, M:41.1%)

Unemployment rate young people aged 15 to 24 years (2020): 46.9% (F: 61%, M: 40.8%)

NEET (2020): 37.7% (F: 38.1%, M: 37.4%)

Source: Kosovo Agency for Statistics (2021)

Internet penetration: 89% (January 2020), 91% (January 2021)

Mobile connections: equivalent to 93% of the population (2020) and 103.6% (2021)

Source: Kemp (2020), Kemp (2021)

maintained in informal labour with low earnings, limited access to social protection and little opportunity for social mobility. Improving educational outcomes, including skills development, has been an important goal for Kosovo, so as to support young people's transition to employment.

► EDUCATION DURING THE PANDEMIC ◀

It is in this context that the COVID-19 pandemic hit.

At this time, Kosovo had no national platform to provide distance learning to school students. Data from PISA 2018 revealed that only 22% of school principals in Kosovo reported an effective online learning support platform available, against 49% in neighbouring Montenegro, ranking Kosovo at the bottom of the Western Balkan countries; for comparison, the OECD average was 54%. (The World Bank Group, 2020). The Kosovo Education Strategic Plan for 2016-2021 identified the lack of IT infrastructure and equipment in schools, teachers' poor digital skills and the absence of electronic textbook and other teaching and learning materials as major constraints to the implementation of the new Curriculum and the improvement of teaching and learning in Kosovo (MEST, 2016).

Internet penetration is however quite high, with 89% in January 2020 and a number of mobile connections equivalent to 93% of the population in early 2020 (Kemp, 2020). PISA 2018 data also showed that 83% of 15-year-old students in the lowest Economic, Social and Cultural Status category had a link to the internet, rising to 98% for those in the top Economic, Social and Cultural Status category. Respectively 58% and 95% of students in these categories had a computer they could use for schoolwork.

Schools closed from March 2020 to the end of the academic year. They re-opened in September 2020 in line with guidelines provided by the Ministry of Education, Science, Technology and Innovation (MESTI), which regulate the education process (face-to-face with prevention measures; face-to-face in small groups only and with adapted timetables for Grade 1 to 5 students and remote learning for others; or remote learning for all students) according to three scenarios linked to epidemiological risk levels.

In 2020, experts foresaw that learning loss due to the pandemic would be significant in both the short and long term. Based on a March to June school closure scenario with no remote teaching, estimates showed a likely average drop of 16 PISA points in the Western Balkans (reduced to 9 PISA points with remote teaching in place). For Kosovo, this would mean a reading score below its 2015 level, and an increase in the learning gap between students in the highest income quintile and those in the lowest from 1.5 years schooling (2018 level) to almost 2 years (The World Bank Group, 2020).

During the March to June closures, teachers used a variety of platforms to maintain some level of contact with students and provide some distance education. Some municipalities worked on their own platforms and distance education solutions, and the MESTI developed videos in the Albanian, Bosnian, Turkish and Roma languages for learning units for Grades 1 to 9 only, which were broadcast on the Kosovo public TV channel, RTK, as well as on YouTube. Provision of learning content for secondary and vocational school students was left to municipalities and schools, creating disparities as a consequence of differing capacities and access to technology between municipalities, schools and teachers.

School closures and discontinued learning were therefore very likely to further jeopardise the education outcomes of children and young people in Kosovo.

► UNICEF WORK IN KOSOVO ◀

UNICEF's work in Kosovo aims to enable all children, adolescents and young people, especially the most marginalised, to have their rights progressively fulfilled and to develop to their full potential in a protective and inclusive society. UNICEF strives to leave no one behind, to ensure access to services, particularly for marginalized girls and boys, to narrow equity gaps and to amplify the voices of young people. UNICEF supports both national and municipal capacity development, including mobilisation of funds and partnerships, and implements integrated programming in selected municipalities to bridge the gaps between central level policy development and practice implementation locally (UNICEF, 2021).

UNICEF has been supporting the education reform process in Kosovo for over 20 years, supporting central and municipal authorities to strengthen the normative and education policy framework, to increase access to education, to improve the quality and inclusiveness of education, and to enhance governance.

When the COVID-19 pandemic reached Kosovo, UNICEF's education response focused on the provision of remote learning materials for all children during school closures. To this end, UNICEF convened partnerships and leveraged resources for: (i) an online Early Childhood Development digital platform to enable at-home skill development and (ii) the Learning Passport for children and young people to continue learning and develop skills remotely.

► THE LEARNING PASSPORT INITIATIVE ◀

Globally, the Learning Passport initiative was conceived as an on- and off-line 'education passport' for the 30 million children in the world without consistent education access due to migration, displacement or refugee status, so that they could access learning material consistently across countries. It stems from a partnership between UNICEF, Microsoft, and the University of Cambridge, and is part of the Generation Unlimited Global Breakthrough initiative.²

In response to the drastic impact of the COVID-19 pandemic on learning, UNICEF and Microsoft adapted and expanded the Learning Passport to non-conflict countries to support education continuity and home learning. The focus was on countries without any existing active national e-learning platform but with digital copies of the curriculum and sufficient connectivity and devices for learners to follow distance education at home.

Kosovo was selected in April 2020, alongside Montenegro and Ukraine, to roll out Learning Passport in response to the pandemic in the Europe and Central Asia region. Kosovo launched the Learning Passport platform with skills development materials for adolescents and youth in April 2020. Kosovo later integrated the Learning Passport platform in a national e-learning portal called shkollat.org -launched on the 1st of February 2021.

The shkollat.org initiative is an example of how the Learning Passport platform can be adapted to pave the way for blended learning delivery in both formal and non-formal education, when integrated with a hub that distributes licenses and facilitates access to software enabling blended learning.

2 <https://www.generationunlimited.org/our-work/global-breakthroughs>

CASE STUDY METHODOLOGY

▶ OVERALL APPROACH ◀

Kosovo was the first in the Europe and Central Asia region to use the Learning Passport platform in a non-emergency context, and UNICEF Kosovo committed to documenting and disseminating learning and lessons that could benefit other countries.

To this end a case study methodology was devised by UNICEF at the early stages of the roll out of shkollat.org. The case study was articulated around four building blocks:

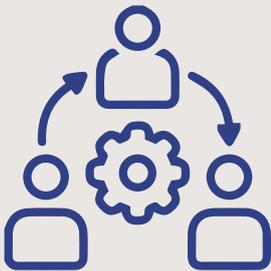


1. **Customising the Learning Passport platform:** Building on the Learning Passport and expanding its scope to meet the education needs of all children and address the challenges of the education system beyond the pandemic.
2. **Reaching all children, adolescents and youth:** Ensuring that Learning Passport works for all children, adolescents and youth and ensuring take up among teachers and students.
3. **Institutionalising solutions in a volatile political context:** Establishing institutional ownership at national and local levels and supporting an enabling environment for the scale-up of innovative solutions.
4. **Transferability of lessons learned:** Ensuring that lessons learned from the Kosovo experience are transferable to other countries and contexts.

▶ METHODOLOGY ◀

The case study methodology used levels of the education system as sub-units of analysis, namely the central level, municipal level and school level. One municipality was selected for the purpose of the case study. Key informants included representatives of MESTI at the national level, the municipality education directorate, a school principal, a teacher, a parent and three students from one school. In addition, interviews were conducted with key project stakeholders within UNICEF, including IT contractors.

The case study methodology built on a mixed method to data collection combining quantitative and qualitative data. Primary data collection took place in the first quarter of 2021 and included:



- ◆ **Semi-structured key informant interviews** with MESTI representatives, UNICEF, IT experts and school level stakeholders,
- ◆ **Pre-and-post training teacher surveys** focusing on teachers' use of digital platforms for distance teaching and feedback on the shkollat.org induction training they received,
- ◆ **A focus group discussion** with UNICEF staff from other country offices (Montenegro, Kyrgyzstan and Tajikistan) to discuss needs, challenges and lessons learned in the implementation of Learning Passport in different contexts.

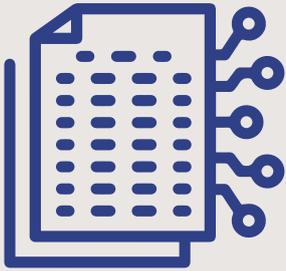
Interviews were conducted, translated and transcribed by UNICEF Kosovo staff. The teacher surveys were devised by UNICEF Headquarters and UNICEF Kosovo. They were administered before and after the induction training on shkollat.org by the training provider.

In addition, a secondary analysis of six focus group discussions with children, adolescents and young people conducted in February 2021 for UNICEF Global Strategic Planning Consultation took place. These focus groups aimed to gather young people's perception on education, distance learning, gender and skills development. These focus group discussions were organised by age group and included children and young people from several municipalities, children with disabilities and children from ethnic minorities.

More information on respondents is presented below:

Desk review	Key informant interviews	Focus group with UNICEF country offices	Secondary analysis of youth focus groups	Survey data
Key project documents and project outputs	15 interviews: UNICEF senior and technical staff (4) Ministry of Education (3) IT experts (2) Director (1) Teacher (1) Students (3) Parent (1)	19 participants from UNICEF Kosovo, Kyrgyzstan, Montenegro, and Tajikistan	6 focus groups held as part of UNICEF Global Strategic Planning Consultation with 36 children and young people aged 10 to 24 years old.	Pre and post training teacher survey (2300 respondents for the pre-training questionnaire, 1370 for the post-training questionnaire)

The data analysis was done in two stages:



- ◆ **Quantitative data.** The teacher pre-and post-training surveys were analyzed by UNICEF Headquarters using a descriptive data analysis approach. Information was produced on basic demographics, teachers' use of e-learning platforms and apps, teachers' knowledge about Microsoft Teams, teachers' perception on the usefulness of shkollat.org and teachers' level of confidence in using shkollat.org.
- ◆ **Qualitative data.** All data was analyzed by an external consultant using a content analysis approach based on a thematic coding system.

Data was triangulated from various sources to validate findings and ensure a range of dimensions were captured in the lessons learned. Under this framework, the consultant conducted a desk review and follow-up interviews with UNICEF Kosovo staff and IT experts to clarify the functionalities of the platform, the timeline of activities and the next steps of the initiative.

▶ LIMITATIONS ◀

The main limitations of the case study include:



- ◆ A research implemented at very early implementation stage, which does not provide qualitative or quantitative information on platform use and uptake.
- ◆ Interview respondents at local level are not representative of the demographics diversity of Kosovo or of the varied views and opinions of the platform's users.

THE GENESIS OF *shkollat.org*

► INTEGRATION OF THE LEARNING PASSPORT TECHNOLOGY INTO A NATIONAL E-LEARNING PLATFORM ◀

When Kosovo was selected for rolling out the Learning Passport platform by UNICEF Head Quarters, the initial ambition was to offer a platform that would host both the formal education video content developed by the MESTI for remote learning during lockdown with digital non-formal and extracurricular education activities for adolescents developed by UNICEF, namely UPSHIFT, PONDER and PODIUM (see box below).

In the context of the pandemic, school closures and hybrid learning practices, the limitations of this initial plan quickly emerged. While the Learning Passport platform had a huge storage capacity for digitised materials and could support the creation of learning paths (i.e. a series of learning activities proposed to a learner based on learning interests or needs), it remained a 'static' platform that could not enable communication or collaboration between teachers and students and amongst students. The Learning Passport platform could not offer fully interactive learning.

Harnessing the potential of existing technology

In 2017, a legislative basis for the ICT sector was established by the MESTI and the Ministry of Public Administration. This led to Kosovo institutions securing Microsoft licenses for all education staff and students in Kosovo. To distribute the licenses, a hub was created in late 2019: www.shkollat.org.

LIFE SKILLS FOR ADOLESCENTS AND YOUTH

UPSHIFT started in Kosovo in 2014 and is now found in 22 countries. UPSHIFT addresses the lack of opportunities and the shortcomings of education systems that fail to provide skills for work and for life to young people.

It delivers skills that support future opportunities for life and livelihood for the most marginalized and vulnerable youth through: (i) Building transferable skills, (ii) Adolescent and youth empowerment, (iii) Civic engagement, and (iv) Entrepreneurship.



PONDER improves the life skills of adolescents by fostering media literacy and critical approaches to information, empowering adolescents to approach information critically, to identify and examine bias, and to judge the value, authenticity, and authority of the information they encounter.

ponder

PODIUM teaches adolescents and youth of the most marginalized groups in Kosovo how to advocate for the needs and rights of their communities. It is an initiative designed to improve the resilience of adolescents and youth by increasing the knowledge of their rights, improving their awareness on the power of social change and advocacy; and cultivating campaign management and advocacy tactics – all while improving confidence and empowerment.

podium

When the pandemic hit, the licensing had not yet been rolled out to users. The roll out had been delayed by the fact that Microsoft Apps were not available in Albanian. It was only during the March to June 2020 lockdown that the 29,000 teachers of Kosovo were registered and provided with Microsoft email accounts.

Microsoft licenses meant that with the right internet connectivity infrastructure and IT equipment in schools and households, all teachers and students could access Office 365 and Teams for Education.

Combining technologies

Combining the opportunity offered by the Microsoft licenses with the Learning Passport technology enabled Kosovo to tackle the dual challenges of (i) temporarily educating thousands of children remotely during the pandemic, while also (ii) enabling the digitisation of education and providing children with inclusive and effective digital learning solutions to accelerate learning outcomes, particularly for the most vulnerable children and youth.

Making this idea a reality required further consultation and negotiations with Microsoft, at the end of which contractual and technical solutions were agreed.

▶ THE PLATFORM AT A GLANCE ◀

[Shkollat.org](https://shkollat.org) was envisioned as a one-stop service providing access to vetted educational content hosted on the Learning Passport platform and access to the Office 365 desktop suite, communication tools and a range of other education Apps through Teams for Education.

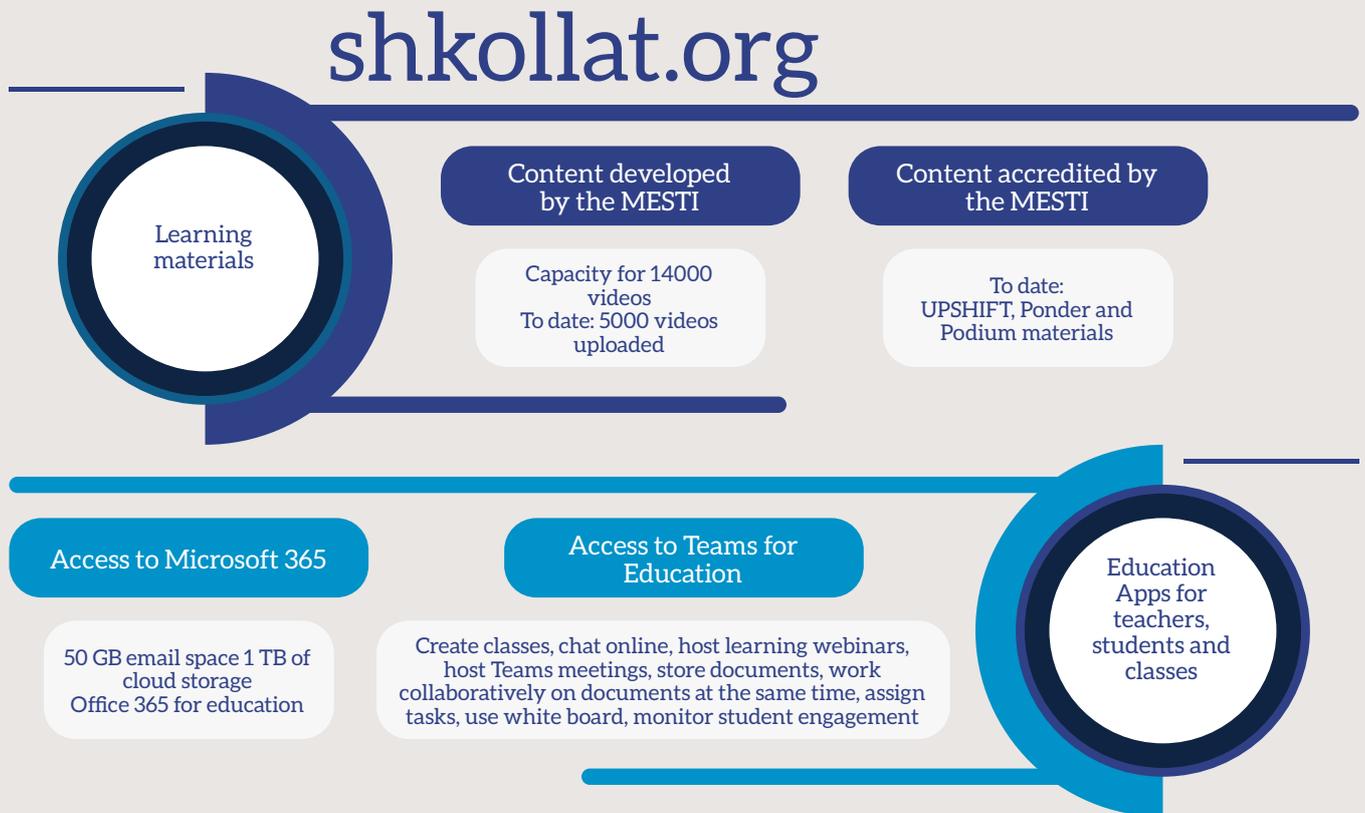
At present, shkollat.org is a landing page that can be accessible to the entire pre-university education system, and which enables:



- ◆ **The creation of a unique user profile for all teachers and all students, linked to a unique education digital ID** generated by the MESTI and linked to a Microsoft email account. This digital ID can also be used to track students' participation in learning.
- ◆ **Access to Microsoft Office 365**, 50GB email space and 1TB storage space on Microsoft OneDrive.
- ◆ **Access to Teams for Education.** In *Teams*, teachers can create classes, students can chat with each other, documents can be shared and worked on simultaneously, lessons can be recorded and shared on replay. Specific Apps give access to white boards, enable teachers to create quizzes and tests, etc. Students also have direct access to the Learning Passport platform and its content through *Teams for Education*.
- ◆ **Access to a repository of formal and non-formal learning materials (Learning Passport).** There is capacity for 10 TB of content (approximately 14,000 videos). To date, 5000 videos developed by the MESTI to support home learning during school closures have been updated, as well as the digitised materials of the UPSHIFT, PONDER and PODIUM skills development programmes for adolescents and youth.

The Learning Passport can be accessed and used by 115,000 concurrent users without being overloaded.

Figure 1 Functionalities and content of Shkollat.org



"Earlier, when we used many platforms at once, we had challenges as we were using Zoom with the teacher, we could not see the assignments, but we had to move to the other platform (Google Classroom). This situation created a lack of coordination. Shkollat has everything in one place."

Student

"I would describe it as a very good platform, it enables all students to join. 'Shkollat' enables you to follow explanations and demonstrations by the teacher using the whiteboard and this is a very big advantage. 'Shkollat' is comprehensive. It is also easy to use."

Teacher

"All features are found in one place (board, lessons, the assignments are uploaded there, there is connection and communication with others)."

Teacher

"It is structured and more systematic compared to other platforms."

Parent

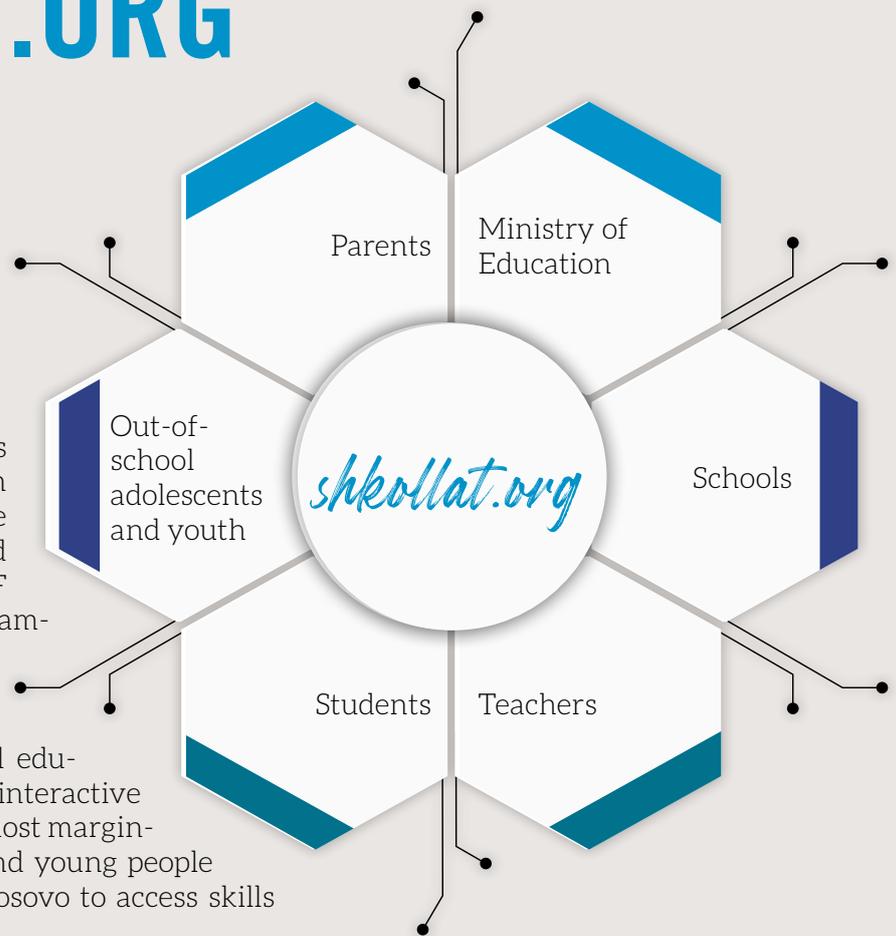
"One of the features I use the most is 'Teams' to communicate with students, to connect with students who are not in the classroom, then 'Kahoot' is another feature I extensively use for compiling tests, 'Whiteboard' is very important to us for science lessons."

Teacher

VISION SETTING FOR SHKOLLAT.ORG

► REACHING ALL CHILDREN, ADOLESCENTS AND YOUTH ◀

Guided by the deeply held values and beliefs that every child can learn, that every child has the right to learn, and that no child should be left behind, UNICEF supported the MESTI to create an ambitious vision for shkollat.org as a long-term national solution that would enable (i) ALL students in Kosovo to access formal education content and experience interactive learning online, particularly the most marginalised, and (ii) ALL adolescents and young people not in education or training in Kosovo to access skills development materials.



As a free-of-charge one-stop service for education and skills development, shkollat.org would contribute to improved teaching and learning, bridge the gap between the curriculum and labour market needs and bridge the skills gap through digitisation of skills development content for broader reach. It would also become key in reaching out to the most marginalised children, including children with disabilities, through assistive technology.

To this end, shkollat.org would in the short term:



- ◆ Provide learning and skills development materials for both primary and secondary students enrolled in formal education and adolescents and youth outside the education system (see Annex 2 for more details),
- ◆ Provide interactive learning tools (email, Office 365 and Teams for Education) to all schools, teachers and students enrolled in formal education,
- ◆ Enable teachers to monitor students' participation in online learning activities,
- ◆ Facilitate communication between teachers and parents, during and beyond the pandemic.

In the long term, shkollat.org would:



- ◆ Enable schools to create and manage the unique digital ID of students and staff,
- ◆ Enable schools to share materials and documents with teachers, students and parents and to encourage teachers to populate school-based repositories of learning materials,
- ◆ Provide individualized learning pathways based on students' age, interests and learning needs,
- ◆ Enable teachers, schools and parents to monitor students' learning progress,

Connect with other aspects of the digitization of the education system, particularly in the area of school governance, school financing, education data, parental involvement and learning outcomes monitoring.

[Shkollat.org](https://shkollat.org) aims to address the needs of all education stakeholders: the MESTI, schools, teachers, students, adolescents and youth, and parents. The idea was that its potential would be fully articulated in the Strategy for the Digitization of the Education System, currently under development.

"Shkollat' gives us a very important opportunity for us as parents to monitor our child's learning progress."

Parent

"Shkollat' enabled me to teach the same content simultaneously to the students in the classroom and the students at home. The whole class (some in the classroom and others at home) was involved in the lessons."

Teacher

"Teams' allows you to keep track of student attendance, which we have previously done manually which wasted classroom time. Another important feature is that 'Teams' is a secure platform because it is not accessible to anyone who is not enrolled in the course."

Parent

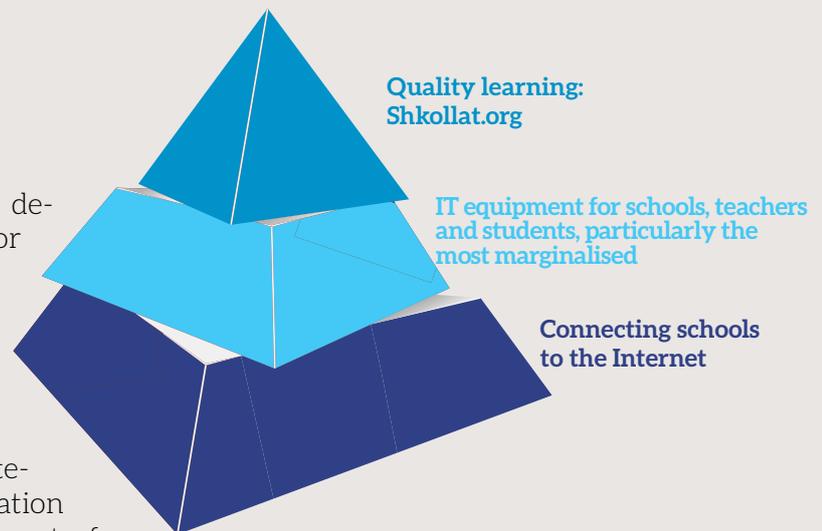
"One of the features that I consider most interesting in 'Shkollat' is the option of grading students. So, the platform has the option of showing grades; the tasks and lessons are found in one place and this makes this platform very functional and practical."

Teacher

▶ ALIGNMENT WITH NATIONAL POLICIES ◀

[Shkollat.org](https://shkollat.org) became a core pillar to the development of MESTI's overall vision for the digitisation of education through infrastructure and IT equipment improvement and the use of blended learning as a core approach to improve the quality of education and learning outcomes.

This built on the Kosovo Education Strategic Plan 2017-2021 which made the creation of electronic resources and the development of the ICT infrastructure in schools (broadband and computers for teachers and students) one of the core strategies for improving teaching and learning. It also fully echoed the priorities of the National Strategy for the Digitisation of the Education system which was under discussion in 2020.



▶ ACCESSIBILITY ◀

The overarching guiding principle behind the vision and implementation of [Shkollat.org](https://shkollat.org) is to reach all children, adolescents and youth.

Accessibility of materials

The shkollat.org vision underpinned the decisions taken to date in the conceptualisation and roll out of the platform and is expected to inform future decisions as usage and user feedback increases, and as technology improves.

[Shkollat.org](https://shkollat.org) is accessible on mobile phones, tablets and computers regardless of operating system. While Office 365 and Teams for Education must be used online, learning materials can be downloaded and accessed offline.

The overall guiding principle of reaching ALL is also illustrated by the various access routes available to access the materials available on shkollat.org.



- ◆ Firstly, content from the Learning Passport platform can be accessed with a mobile phone number for all adolescents and youth not enrolled in the formal education system and therefore not eligible for a unique digital ID from the MESTI.
- ◆ Secondly, children's age was taken into consideration for the creation of user profiles in shkollat.org. Children below 13 years old do not require a personal email address or a personal phone number to set up their shkollat.org profile but can use their parents' contacts.

Figure 5 Access routes to *shkollat.org* content, tools and functionalities



Kosovo offers education in three main languages: Albanian, Bosnian, Turkish. Microsoft Office 365 and Teams for Education are currently provided in Albanian. Videos uploaded on shkollat.org the MESTI video lessons developed in Albanian, Bosnian, Turkish and Roma languages.

"The platform is in Albanian which is a great advantage for us as teachers."

Teacher

The materials developed by MESTI for students with hearing or sight impairments have also been uploaded on the platform.

While to date simultaneous transcripts of calls or video calls in 'Teams' are only available in English, it is very likely that the technology will be available in other languages in the future, which would improve accessibility for students with hearing impairment.

Access to connectivity and IT equipment

A key access barrier to shkollat.org is access to an electronic device and a reliable and sustained internet connection. Despite the high level of internet penetration and high number of mobile connections, as in most countries, there is indicative evidence in Kosovo that some schools have no or little connectivity (such as connectivity being limited to the director's

office and one other classroom) and that some children do not have access to the internet at home. Children might also have limited access to electronic devices (no or broken devices in the family, sharing devices with parents and siblings) or only access to a phone, which might constrain activities such as submission of assignment and use of white board due to small screen sizes and limited phone capacity and memory compared to a computer.

"The most difficult part of distance learning has been power outages, as a result of which some classes were not held, or the Zoom platform was not responding, and there have been interruptions/freezing due to the quality of internet connection."

"A shortcoming may be the freezing, when the board does not appear, as happened during the presentation of 'shkollat' in the classroom."

Student

Student

Finding sustainable avenues for all children and adolescents to be appropriately equipped for distance or blended learning is no trivial task.

As a starting point UNICEF supported the connectivity of 10 schools in Gjakova municipality in 2020 and provided 960 tablets for children with disabilities during the pandemic. More support is planned in forthcoming years in line with the new UNICEF Kosovo Programme 2021-2025. MESTI allocated one million Euros for the purchase of 15,000 tablets for children in need although procurement has not yet taken place at the time of writing. This has complemented efforts made by many donors and municipalities throughout the pandemic.

A comprehensive fund mobilisation strategy is expected under the framework of the Strategy for Digitization of the Education System later in 2021.



OWNERSHIP, INSTITUTIONALISATION AND TAKE-UP

The potential of shkollat.org to improve education delivery in Kosovo is significant but requires long term political and financial commitment from both national and local stakeholders to raise awareness about the platform among schools, teachers, students and parents, to train teachers on how to use and maximise it, to produce content and to continue adapting and improving it so that it includes more features and functionalities.

With three changes in Government since the beginning of the shkollat.org implementation, UNICEF and the technical staff of MESTI had to meet the challenge of maintaining continuity of the work.

▶ PURPOSE DRIVEN WORK ◀

[Shkollat.org](https://shkollat.org) has been developed based on a clear purpose and aims to provide real value to its users.

The ambitious and inspiring vision for shkollat.org rallied all central and local stakeholders behind a concrete digital initiative for improving learning outcomes and bridging the school to work transition gap in Kosovo. This shared vision has been a strong incentive for governments to continue to build on each other's work and thus a guarantee of sustainability.

Furthermore, the provision of a relevant, engaging and valuable learning experience will support take-up amongst teachers and students. The use of the platform will drive its sustainability as experience and feedback from users will inform improvements and future iterations.

"Users will be the best supporters of the platform. The more users, the more sustainable the platform will become. Once it is a national asset, it is likely that governments will invest to maintain it, regardless of political allegiances."

UNICEF staff

▶ HIGH LEVEL BUY-IN AND MULTI-LEVEL STAKEHOLDER ENGAGEMENT ◀

UNICEF leveraged its long-running trust and strong relationship with the government and line Ministries across political changes over time to support the shared vision for shkollat.org in Kosovo.

The visioning process has both initiated and contributed to full stakeholder participation and ownership. The national significance of shkollat.org has required direct buy-in from the Prime Minister and the Minister of Education. In addition to high-level buy-in, securing the commitment of technical staff within MESTI has been critical to securing support for the platform across governments and to ensuring continuity in implementation.

In a highly decentralised context, municipality engagement is also key. At the onset of the pandemic, a few municipalities, including the highly populated Pristina municipality, developed platforms and other EdTech solutions to support teaching and learning during school closures. The launch of shkollat.org as the national solution to remote and blended learning in Kosovo made municipality involvement critical not only to prevent further overlaps and waste of human and financial resources caused by working on different education platforms, but also to support the roll-out and take up of shkollat.org among schools, teachers and students.

Discussions are currently taking place at national level, with the new Education Minister and MESTI, to explore avenues to accelerate the use of shkollat.org in all municipalities.

▶ TEACHER AWARENESS AND CAPACITY ◀

A critical factor for ensuring the take up of shkollat.org amongst the education community is building teachers' awareness of its existence and potential, and their capacity to use it for remote teaching and blended learning. This requires not only training on how to access shkollat.org but also digital skills training and distance or blended learning pedagogy capacity development.

"There have been difficulties in using IT for distance learning, especially among older teachers."

Student

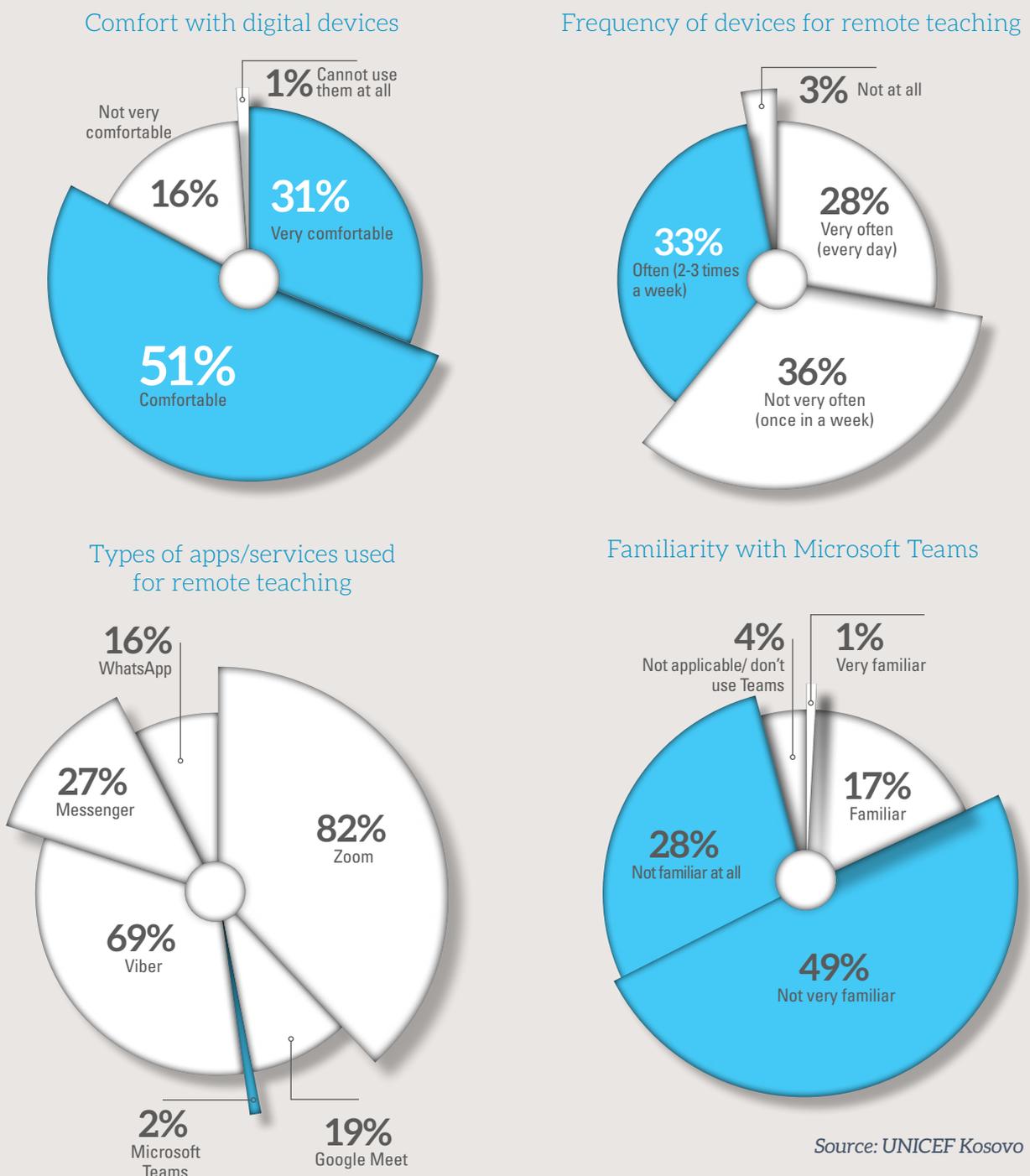
UNICEF Kosovo supported a first series of shkollat.org induction training sessions for teachers. To avoid duplication with other digital skills training provided by a range of donors and charitable organisations during the pandemic, UNICEF targeted 15 municipalities where no digital skills capacity building activities had taken place.

From January 2021 to date, 2500 teachers have participated in Saturday training session on a voluntary basis. Sessions were facilitated by MESTI staff and supported by UNICEF implementing partners Open Data Kosovo (ODK) and Global CT Digital Kosovo, the local IT company that supported the development of shkollat.org.

The aim of the training was to support teachers to access the shkollat.org system, to set up their shkollat.org profile and to understand the basic functionalities of the platform, including the creation of classes and the basic functionalities of Teams for education. The training did not tackle pedagogical competencies in the context of use of digital or blended learning for quality teaching at this stage.

Information gathered through pre training questionnaires provides useful insights on teachers' digital skills and remote teaching practices (see graphs below). While teachers felt mostly comfortable using digital devices such as computers, tablets or smartphones before the training, many of them did not regularly use these for remote teaching. More than one in three teachers stated that they use remote teaching devices only once a week. **Microsoft Teams** was used by only 2% of the teachers surveyed and the vast majority of respondents were not very or not at all familiar with Teams prior to the shkollat.org induction session. This result underlines the relevance of the induction sessions and points towards the need for greater capacity building on **Teams for Education** so that teachers feel confident to explore its use for classroom teaching during and beyond the pandemic. To note that there is no significant difference in results when analysed by age groups.

Figure 6 Sample results from the pre training teacher questionnaire (n=2308)



Source: UNICEF Kosovo

A brief post training feedback form provides initial feedback on shkollat.org and teachers' impression of Teams for Education (see graphs below).

The vast majority of teachers perceived shkollat.org as easy or very easy to use and useful or very useful. While a majority of teachers reported being confident to use the platform and support students to use the platform, a third of teachers, were not quite confident in using the platform and a quarter in supporting students to use the platform at the end of the training. This highlights the need for additional capacity building activities, including basic digital skills, for teachers to become users of the platform and benefit from the content and functionalities of the platform.

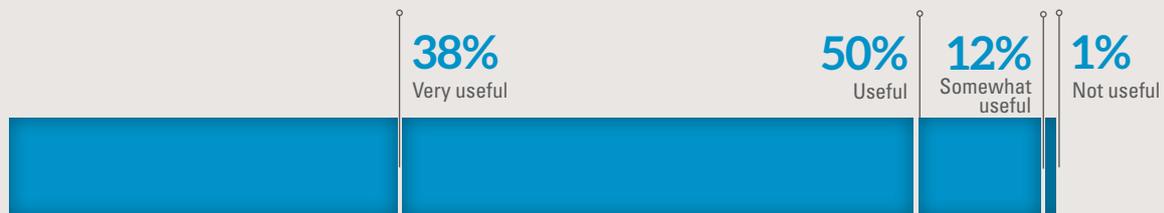
This was confirmed by teachers themselves as the majority (56%) stated that they would need more time to learn how to use shkollat.org. A third of teachers identified professional development on technology issues as a necessary area of support to be able to use the platform for remote teaching.

Figure 7 Sample results from the post-training teacher questionnaire (n=13766)

Perception about the platform after the induction session

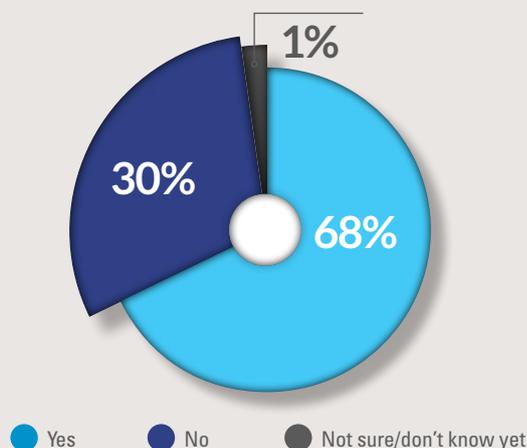


Ease of Use

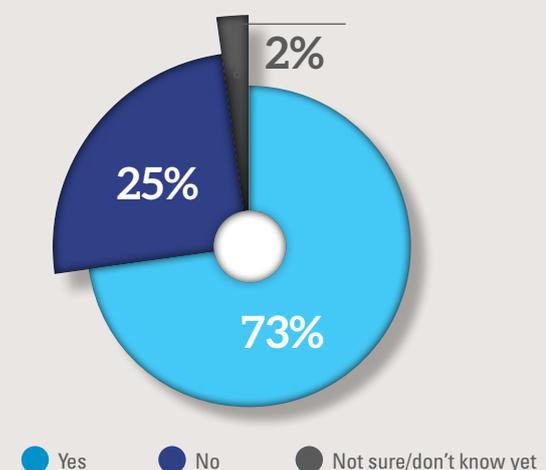


Useful of remote learning

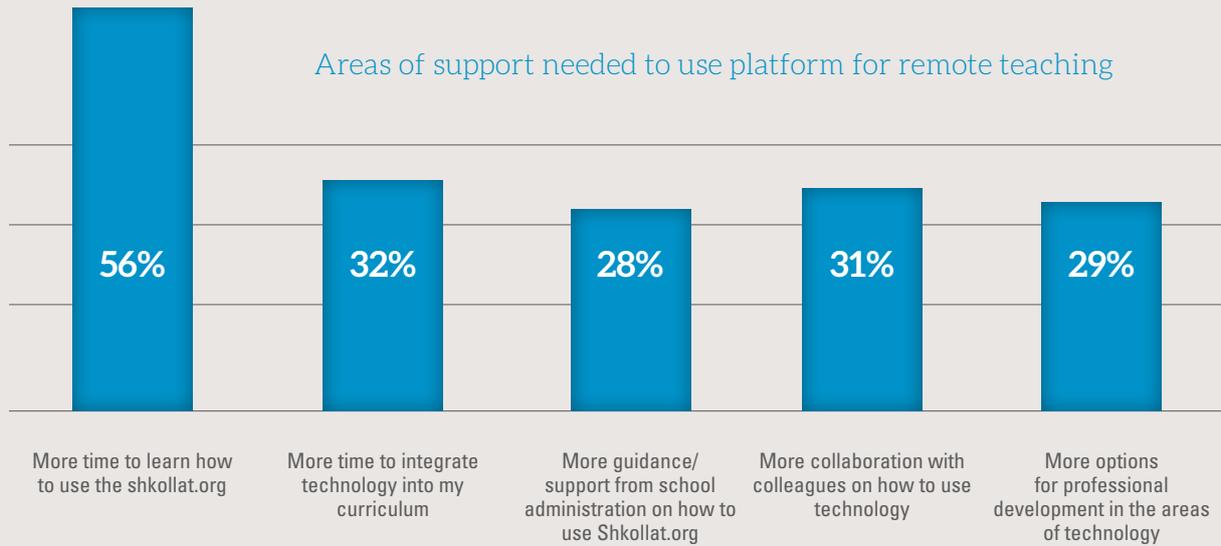
Confidence in ability to use Shkollat.org in classes



Confident can assist students on using platform



Source: UNICEF Kosovo



"This platform enables us to be as close as possible to the students. Initially, there was scepticism amongst teachers regarding 'Shkollat', but as soon as they were familiarized with it, their attitude changed positively. Continuous trainings on the use of 'Shkollat' are required."

School Director

"One challenge for teachers was choosing a strong and eligible password and understanding multifactor identification."

IT Consultant

"By far the most adequate platform for the use of distance learning."

Teacher

▶ STUDENT AWARENESS AND CAPACITY ◀

Equipping users with the understanding and skills to navigate shkollat.org, its content and the Apps and functionalities available in Office 365 and Teams for Education is also key to ensuring that all children benefit from these materials and tools, can use them autonomously, and can fully enrich their learning experience.

To this end, video tutorials for learners have been made available to support the independent use of the three non-formal skills-based programmes UPSHIFT, Ponder and Podium. Tutorials on the various Apps available from Teams for Education are also being developed for different student age groups. Other avenues are also currently being explored in the context of broad national partnerships to guide and accelerate students' use of the platform (see Ways forward below).

"The platform contains instructions for using all the features. To me it is quite user-friendly."

Teacher

"I would like to be invited by the school to be introduced to the learning platform in more detail so that we, as parents, can be aware and get acquainted with developments in the field of learning platforms and be able to help our children."

Parent

THE WAY FORWARD

The main challenge today for Kosovo is how to accelerate shkollat.org take-up and use by teachers, students and out-of-school youth. The following strategies have been identified.

▶ EMBEDDING shkollat.org AT THE HEART OF THE EDUCATION REFORM PROCESS ◀

To embed shkollat.org in the education reform process addressing poor teaching quality, low learning outcomes and the labour market skills gap, UNICEF, MESTI and partners will focus on the following topics in the forthcoming months and years:

- **Education reform support.** UNICEF will continue to support the education reform in Kosovo with the aim of improving education quality. Entry points for shkollat.org to make a significant contribution in this area include teacher professional development, particularly in the area of pedagogical skills and quality inclusive teaching practices, textbook review and digitisation and skills development for youth.
- **Advocacy, awareness-raising and branding.** An advocacy strategy is under development to sustain commitment from the Kosovo institutions, to speed up the take-up process at municipal and school levels, to involve more donors and partners in the rollout, and to address parental awareness. Social media will play a significant role in the dissemination of shkollat.org.
- **Normative framework.** Legislation, regulations and guidance are needed to support the adoption of shkollat.org by municipalities, to frame the use of the unique digital ID and platform for education purposes only and to address data security and privacy. As Kosovo is expanding national policies on digitisation within and beyond education, and as more education activities are expected to be done online, appropriate legislation and guidelines for schools, teachers, parents and students are necessary on issues of internet safety for children and adolescents, including cyber bullying.
- **Content creation.** More content is to be created for all age groups, particularly upper secondary students and out-of-school youth. Content adaptation for students with disabilities is also required. Several avenues are being explored to integrate existing digital content from external sources in shkollat.org, such as materials from Khan Academy or Microsoft Education Centre, but to date there is low availability of materials in Albanian. While there is not yet a plan to enable teachers to share their own learning materials on the platform, schools will be able to set up such a system for their own staff through the cloud.

"I would greatly appreciate if it would be possible to make textbooks available online in 'Shkollat'."

"The lessons are mainly for primary schools, and it would be good to have materials for upper secondary level."

Teacher

- **Accessibility and adaptability.** Longer term plans include the development and inclusion of digital textbooks, making more materials fully accessible to children with disabilities and supporting teachers to differentiate learning pathways based on students' individual needs. Avenues for using shkollat.org's data analytics to customise the user's learning experience will also be explored as well as ways of building formative assessment into the content to guide teachers and students on possible materials to use for their next learning steps.
- **Teacher training and professional development.** More teachers require training on the basic functionalities of shkollat.org and Teams for Education, and how best to make use of the content on the platform and integrate it into their regular classroom practice. In the short term, this will be addressed through both on-line tutorials and induction sessions or formal training, from UNICEF and other donors and partners. In the long term, strategies for developing and upgrading teachers' digital skills in a systematic and sustainable manner will be necessary. Teacher training and professional development policies will also need to ensure that teachers' pedagogical skills for providing quality and differentiated instruction for students in digital environments and with digital tools and content will be adequately developed and supported.

"The training was detailed but we need some time to master the use of the platform!"

Student

- **Student support.** Beyond the tutorials on platform use that are being developed for students, discussions are taking place on large scale modalities for training students on various Apps and digital skills. Avenues such as existing volunteering programmes or UPSHIFT alumni are being considered. The role of schools in equipping students with adequate digital skills is also key. Focus group discussions with young people revealed that some students experienced challenges in studying remotely throughout the pandemic. While this finding is not directly related to shkollat.org, it speaks to the need to support students' digital skills development, and their independent engagement with virtual learning environments.

"Some children with special needs had difficulties with learning how to use the virtual learning platforms."

Focus Group with Youth

- **Technical and functionality improvement.** Microsoft, UNICEF and the local IT partner continue to work on technical issues, particularly around the mirroring of content in the two database instances for phone access and unique digital ID access, which requires a sustainable solution. Other improvements will be made based on user feedback. To this end feedback loops and monitoring tools will be developed by partners to continuously improve the users' experience (see bullet point below). Partners will also reflect on possible add-ons for parents and schools so as to maximise the relevance of the platform for these two audiences. Under preliminary discussion is the integration of a student or school management system within *Teams for Education*.
- **Monitoring.** There is a need for a monitoring framework and tools to monitor platform use, users' experience and learning outcomes. Greater efforts have to be deployed in this area, not only in the use of digital ID to track students' participation in learning, monitor progress and adapt teaching and assignments accordingly but also in terms of assessment of learning outcomes more broadly to inform planning and policy development. The Learning Passport platform offers an array of in-built analytics reports regarding learners' enrolment and progress that require clarifying responsibilities for analysis and feedback into content creation and teacher and student induction sessions. These include: (i) reports per content category, (ii) reports per course (level of course completion and where quizzes exist, percentage of correct answers and number of attempts as well as final course test success rate, (iii) reports per group, such as grade level, school, region or sex, and (iv) report per users when logged in with their shkollat.org unique ID.

► DEMONSTRATING RESULTS AT LOCAL LEVEL ◀

To feed into the scaling process described above, UNICEF will actively support the rollout of shkollat.org in four target municipalities benefiting from cross-sector interventions to maximise impact on children. This is being done through:

- School internet connection and IT infrastructure.
- Digital skills training and shkollat.org induction training for teachers.
- Provision of IT devices to the most vulnerable students and to children with disabilities.

It is expected that these IT related interventions, combined with other education activities aiming at improving the quality and inclusiveness of education, will accelerate learning outcome improvements for children and adolescents.

► LEVERAGING PARTNERSHIPS FOR SCALE-UP ◀

Leveraging partnerships is a core strategy for scaling up the use of shkollat.org nationally and for demonstrating results at local level. Leveraging strategies will include:

- Convening partnerships for the rollout of shkollat.org in other municipalities, particularly with donors that are active in the education sector.
- Identifying public and private partners for the provision of IT devices and equipment to schools, students and young people, including people with disabilities.

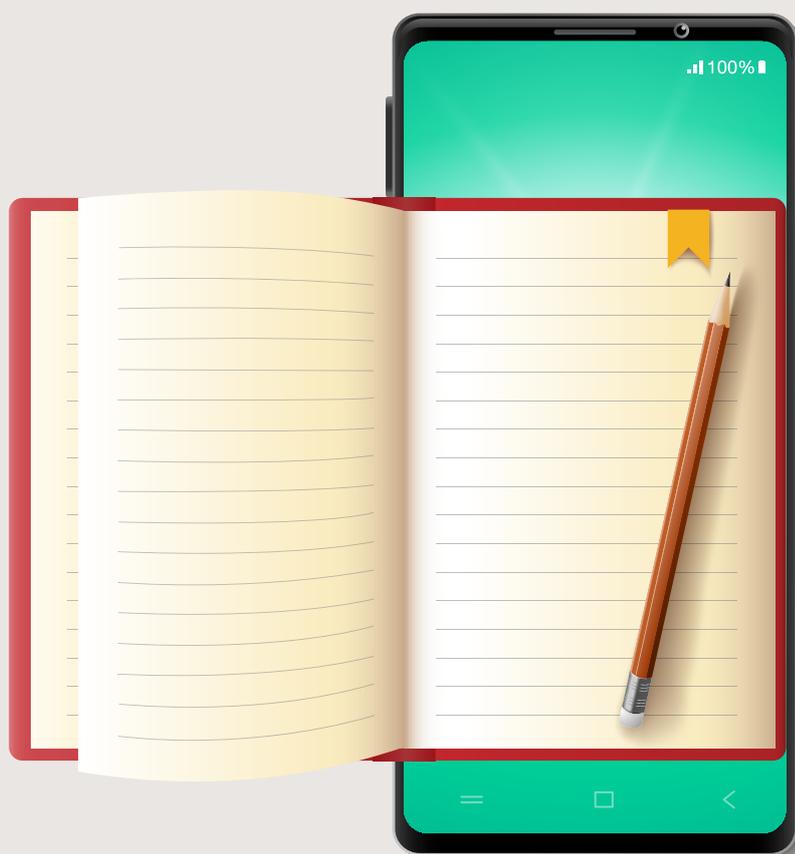
- Building a network of training providers able to embed the shkollat.org induction training in their regular training activities with teachers and schools.
- Multi-sector and multi-stakeholder partnership building to reach the most marginalised, including through partnerships with the Ministry of Health, the Strategic Planning Office/Prime Minister Office, and the Ministry of Finance, Labour and Transfers, for disability sensitive budgeting in support of the implementation of the Strategy for Digitisation of the Education System.

► GENERATING EVIDENCE ◀

As mentioned above, discussions are taking place on monitoring approaches, data generation and automated use of data by shkollat.org. In addition, partners are exploring which areas to prioritise with regard to evidence generation in the short- and mid-term, including:

- Learning about how blended learning is used as a tool to promote inclusive and quality education – such case studies could also play a role in inspiring teachers to try out new functionalities within the platform and build blended learning more regularly and more reflectively into their practice.
- Learning about the use of UPSHIFT, Podium and Ponder in upper-secondary schools as these materials have never been used in a formal education context before.
- Learning about content creation, accessibility of materials and reaching out to the most marginalised (practices and results).
- Rigorous evidence generation on results, outcomes and impact, including on digital learning skills of students and on youth skills development. Data generation will feed directly into planning and funds mobilization.

UNICEF is committed to continuing to document the shkollat.org rollout process and to supporting the MESTI to generate evidence along these lines.



KEY CHALLENGES AND LESSONS LEARNED

An ambitious programme such as the setup of a national e-learning platform necessarily encounters challenges. As Kosovo designed and started rolling out shkollat.org, valuable lessons were learned which could inform the work of other countries and UNICEF offices.

► VISION, ALIGNMENT AND OWNERSHIP ◀

A recurrent challenge in the Kosovo context has been political volatility, which can result in priority shifts and jeopardise the development and implementation of ambitious and complex programmes that require commitment, and both financial and political support over time to be successful.

Creating an ambitious, shared and aligned vision

A strategy for institutionalising Kosovo's national e-learning platform in a politically volatile context has been to support the development of an ambitious vision that was driven by the purpose of leaving no one behind and guided by the principle of reaching all children, adolescents and youth.

The vision of accessible blended learning opportunities for all children and youth was aligned not only with Kosovo's immediate needs resulting from the education disruption following the pandemic but most importantly with medium-term national strategies and education policies. Indeed, the education reform process aims to significantly improve teaching and learning and address the labour market skills gap that leads to unemployment. The vision for shkollat.org enabled the rallying of stakeholders behind the development of a national e-learning platform and to share an understanding of its benefits for teaching and learning and for the education system in the long term.

Ensuring high level buy-in and ownership at all levels

A big vision requires backing at the highest level of the state while also ensuring ownership by political and technical ministry staff to ensure continuity across government changes. Ownership at both national and local administrative levels is also necessary to lay the foundation for nationwide take up of an EdTech solution. Local cooperation requires significant time and effort, but it builds trust and the foundation for a successful implementation. UNICEF has the knowhow to play this convening role and facilitate this process.

Another lesson is the importance of early and broad governmental stakeholder engagement, both across Ministries (Education, Youth, IT) and within the MESTI. By involving a range of Departments such as Curriculum, Teacher Training, Planning, EMIS, Policy, Non-Formal Education and Accreditation, the vision is more widely shared and supported. Stakeholders are also prepared for a long-term engagement as the e-learning platform evolves, improves and integrates other types of materials or materials from other sources.

▶ LOCAL RESOURCES AND CAPACITY ◀

Maximising opportunities

The vision, development and roll out of shkollat.org has built on opportunities such as the Microsoft licensing contract. It has also built on a decade of UNICEF commitment to advancing its service to children and youth and the provision of social innovation and social entrepreneurship opportunities for adolescents to become a force for positive social and economic change. This meant that shkollat.org could be quickly populated with proven non-formal and skills development learning materials. Not only were materials already developed, tested and in use in Kosovo, but they were also accredited by the MESTI, which facilitated the speed at which they could be made available digitally.

Strong and flexible local technical partners

Strong local technical capacity is required to interact with the UNICEF Global Learning Passport team and Microsoft engineers, and to understand and be able to respond swiftly to specific local needs, constraints and technical challenges. It is also important that IT contract providers are selected on the basis of proven ability to ensure service stability and reliability with large numbers of concurrent users. Failing to do so would necessarily result in upload and usage problems down the line, such as site crashing.

▶ POLICY PLANNING PROCESS ◀

Ensuring take-up and use of an e-learning platform of this type, ensuring its maintenance, improvement and expansion today and in the future raises a number of challenges around:

- Teacher training and teacher professional development not only for digital skills but also pedagogical skills for teaching and learning in virtual environments. Teachers need the knowledge, skills and capacity to engage and support students in collective and independent use of the tools and learning materials;
- Planning and funds mobilisation for purchase and maintenance of IT equipment and internet infrastructure for schools, teachers and students, particularly the most marginalized;
- Accessibility for students with disabilities; and
- Internet security, data privacy and confidentiality.

All these challenges call for sound policy and planning processes.

Teacher capacity development

Teacher capacity development is to be addressed in the short, medium and longer term. While quick wins and ad hoc partnerships can build awareness about an e-learning platform and give teachers the basic skills required to operate it, sound strategies for developing and

upgrading teachers' digital skills in a systematic and sustainable manner are necessary. Longer term pre-service teacher training and teacher professional development policies will also support teachers to develop the necessary pedagogical skills for providing quality and differentiated instruction for students in digital environments and with digital tools and content. This links not only to the education reform process and funds mobilisation to support it, but also to a shift in what traditional teacher training providers have to offer, which has in turn an implication on training providers own capacity development to respond to the challenges of using blended learning to improve the quality of education and learning outcomes for children.

Capacity development strategies should also clearly focus on the use of blended learning to improve inclusive education and learning outcomes for students with disabilities and special educational needs.

Funds mobilisation for internet infrastructure and IT equipment

Access to mobile phones, tablets, computers and a reliable internet connection remains limited in some schools and households, particularly the most disadvantaged. Building partnerships and planning for securing IT equipment, including assistive technology, for the most marginalised children and schools from the outset is important.

In the medium term, issues of maintenance and renewal of IT equipment will also become critical. Planning for IT maintenance and renewal across the education system is therefore necessary for national and local authorities to be able to build partnerships, secure funds and prioritise support based on needs. Coordination of efforts amongst donors is key to leaving no one behind. Generating evidence of the impact of shkollat.org on teaching and learning is a way to build business cases for donors that might normally be reluctant to invest in internet infrastructure and IT equipment.

Internet and data security

Alignment to and compliance with data privacy regulations is an important area of work. [Shkollat.org](https://shkollat.org) not only had to be tailored to Kosovo legislation requirements on data privacy (Assembly of the Republic of Kosovo, 2019) but Microsoft, as a host for Learning Passport, also abides by strict standards for data protection, in compliance with the European Union's General Data Protection Regulation (GDPR).

Introducing a platform such as shkollat.org requires not only legislative change and the production of guidelines for schools, teachers and students on internet security, data privacy and confidentiality, but also a review and updating of the normative framework and accompanying guidelines for cyber bullying and the protection of children and adolescents on the internet. Weak understanding among teachers, students and parents about the need to strictly limit the use of the shkollat.org email addresses to education matters also calls for wide awareness-raising campaigns on the use of IT in education settings and on cyber protection policies.

► OVERCOMING TECHNICAL CHALLENGES ◀

Needs identification

Understanding local needs and anticipating end-users' requirements is key to the national adaptation of the Learning Passport technology and its integration into a national e-learning platform such as shkollat.org. This process has been successful in Kosovo thanks to direct and open communication between the MESTI and the UNICEF Global Learning Passport team.

"Listening to the Ministry to better understand their needs and not interfering or imposing our priorities was key and we strived to find areas where our priorities overlap and where we can work jointly."

Learning Passport Team

In a competitive EdTech market, only stable and flexible solutions are likely to respond to the needs of national education systems. Learning Passport combines the knowhow of Cambridge University for learning materials, Microsoft for hosting and technology integration, and UNICEF for vision creation and government ownership strategies. This is believed to have laid the foundation of a world-class education solution.

Necessary support and assistance from Microsoft and UNICEF Global and Regional offices

A lot of support from Microsoft was needed throughout the process of integrating Learning Passport technology, Office 365 and Teams for Education into an interactive platform such as shkollat.org. Support was also necessary from UNICEF Global Learning Passport team, including for liaising with Microsoft, and from UNICEF Regional Office for fixing temporary technical issues and supporting the capacity of local IT partners and MESTI staff. Solutions offered by Microsoft and UNICEF were tailored to Kosovo's needs and vision.

Technical challenges at a glance

Many technical challenges arose in the process of customising shkollat.org and integrating the Learning Passport technology into the platform, including:

Platform capacity

Capacity issues had to be solved both in terms of overall size and sizes of individual objects. This led to UNICEF contracting local companies to provide additional cloud storage so as to ensure that shkollat.org could accommodate a significant number of concurrent users.

Database instances.

The integration of the Learning Passport technology with shkollat.org required the management of two separate databases for content storage, one for the mobile number access and one for the unique email access. Mirroring the content in the two databases required a time-consuming manual upload in each database in the absence of a Sync tool. This is an issue that the Microsoft team has not yet been able to solve.

Video uploads.

The upload bandwidth was a challenge and bulk uploads were failing when one of the files was above a certain size. Adjustments on the shkollat.org two database instances had to be made by Microsoft to accelerate the uploading process.

Zip uploads.

Zip file uploads were not possible. While Microsoft was working on the issue, a temporary solution had to be found by UNICEF Regional Office to speed up the uploading process, which required a significant workload in a very short period of time as all files containing Albanian characters had to be renamed as those were not readable by the Regional Office's computers.

Ensuring sufficient time for the creation of unique digital ID

The absence of a centralised database of students in Kosovo meant that MESTI could not create the email accounts for each teacher and student directly but had to request municipalities to provide teacher and student basic information to do so. Despite the use of a pre-formatted .csv file, the information provided by municipalities and schools required significant checking and cleaning as teachers had modified the file extension and a range of cell properties (see Annex 2 for more details).

Digitisation process

The digitisation of materials must be modular if the platform aims to enable teachers to develop individual learning pathways for students, or if automated learning progressions are to be suggested to students based on available data analytics.

Digitising non formal education materials such as UPSHIFT, Podium and Ponder requires an understanding of the programmes so as to be able to appropriately select and adapt materials to a virtual learning environment. This has implications for the selection of consultants or partners to conduct the work and for the time that UNICEF is likely to have to invest in bringing the selected team up to speed, or indeed in building its capacity on the given programmes (see Annex 1 for more details).

▶ HUMAN RESOURCES ◀

The design and roll out of shkollat.org has resulted in a heavy workload for all project staff, including the local IT company and officers and focal points within the MESTI.

Teamwork and commitment

Deploying shkollat.org has required the establishment of a dedicated multi-stakeholder project team backed and supported by senior management. Involvement of and coordination between different UNICEF entities (Headquarters, the Regional Office and the Kosovo Office) has also been key for building overall staff capacity, and so that expertise could be brought in when unexpected technical challenges and limitations arose.

"The best Learning Passport deployments happened with very strong and dedicated teams."

Global Learning Passport Team

Clearly defining the roles and responsibilities of each team member, within UNICEF entities and across partners (MESTI, IT experts, content experts, etc.) is also crucial.

Being agile

Flexibility is required from teams embarking on this type of project. As contexts evolve and technical issues emerge, teams need to be able to adapt and solve problems quickly and creatively. Working on EdTech solutions also involves adopting a process of testing and refinement based on users' needs and feedback. The need for agility needs to be conveyed to all partners and reflected in contractual agreements.

Ministry staff and workload

In the absence of a Digital Education Unit in the Ministry, it is likely that the workload will fall on staff with other responsibilities within the Ministry, hence significantly increasing their workload – this was the case in Kosovo. Supporting the creation or enhancement of a dedicated Department or Unit and considerations for ministerial division of labour at the onset of an e-learning initiative of this size will secure availability of staff and avoid ministry officials facing an unmanageable workload. Advocating for the Ministry of Education to create the necessary administrative structure for digital and blended learning is also a prerequisite for ownership and sustainability.

Peer to peer exchange

It can be challenging to establish peer-to-peer exchanges across UNICEF offices and governments that are relevant throughout an entire implementation process when countries have different start and end points. Without the feeling of contributing to a shared goal, peer-to-peer exchange can lose momentum, relevance or both.

Identifying concrete activities to which all participating countries can contribute would enhance the quality and richness of the exchange process. Framing the exchange modality is also useful, through the allocation of a dedicated staff member in charge of coordinating and conveying peers and peer exchanges and of dedicated channels for UNICEF staff, IT experts and Ministry officials, such as 'Teams' channels and thematic online meetings.

Another lesson is to ensure peer exchange mechanisms also benefit from external insights, including from countries outside the region that have previously developed e-learning platforms and have more lessons to share on usage in schools and classrooms, monitoring of learning outcomes, and challenges to anticipate during rollout or scale-up.

Direct transferable benefits from the Kosovo experience to other countries

Beyond the general lessons learned presented above, the experience of Kosovo can directly benefit countries as follows:

- Countries developing platforms building on the Learning Passport technology. Following the experience of Kosovo, the global Learning Passport platform structure has been significantly upgraded. The Microsoft team has addressed a range of issues to enable customisation and integration in national domains and developed useful know-how that will serve other countries.
- Countries generalising the use of 'Teams for Education'. The induction training sessions for teachers in Kosovo focused mostly on the use of the Teams for Education Apps. Training materials developed in Kosovo to this end are ready to be shared with other UNICEF Country Offices.

ANNEX 1.

APPROACH TO THE DIGITISATION OF UPSHIFT, PONDER AND PODIUM FOR LEARNING PASSPORT

The Kosovo Learning Passport platform was launched in April 2020. Initially, UNICEF Kosovo recruited two local consultants to digitise three UNICEF skills development courses: UPSHIFT, Ponder and Podium. In close collaboration with all parties involved, the consultants developed the methodology “Divide and Conquer” to underpin the digitisation of the materials.

DIVIDE	CONQUER
Get all materials	Understand the material
Identification of “key players”	Deep interview and discussion with all stakeholders
Online Learning Platform	Analyse current courses on Microsoft Sangam - now called Microsoft Community Training
Creating an approach	Design and discuss, then create the approach
Feedback	Present the approach to the group
Documentation	Get feedback from the group and analyse it
Testing	Use well-known standards like UML and mock-ups to document the approach

The first version of Learning Passport for Kosovo was accessible through mobile phone numbers.

Based on the analysis and tests of the platform, the consultants adopted a 3-C approach for organising the courses on Learning Passport.

1. Training of Trainer Course for Mentors – dedicated to mentors

- One set of videos for the whole UPSHIFT programme (based on the facilitation guide), including detailed explanations plus case studies from participants in previous cohorts (UPSHIFTERS)
- One shared folder for mentors (not implemented to date)
- Programme quiz to assess progress (not implemented to date)

2. Mentor-led programmes (UPSHIFT, Ponder or Podium)– accessible to selected participants only following an application process.

- Short video – introductory videos to be shown prior to each module,
- Participants’ work can be saved on shared boards,
- Resources
- Audio, video communication with mentor and other mentees in the group.

3. Self-taught programmes (UPSHIFT, Ponder or Podium)– accessible to all young people.

- Case study videos on UPSHIFTERS,
- Videos to support users to understand the programme process,
- Quiz at the end of each module,
- No Dashboard.

The Learning Passport platform did not support the functionalities that were necessary to implement the second option from the 3-C approach. It is to overcome this hurdle that the idea of integrating Microsoft Teams with Learning Passport germinated. Unfortunately, Microsoft licences were only available for formal school students in Kosovo and not adolescents and youth out of school.

ANNEX 2.

GENERATING UNIQUE DIGITAL IDS

One of the biggest challenges after the launch of Learning Passport under shkollat.org nationwide was to gather and access student data (name, middle name, surname, personal email address, etc.) to be able to generate the unique digital IDs. Neither schools nor the MESTI had such data in digital format. To overcome this, the IT consultants created an Excel template that all teachers filled for their class. Data from 4,100 response emails was processed as a result. When pre-processing the data, the following issues emerged:

- The original Excel template was discarded, replaced or altered,
- Special characters were included in fields,
- Spaces were included within words,
- All data was sometimes included in a single cell,
- Scans were received in some instances instead of Excel files.

Some teachers were requested to revise the information they provided.

Then a rigorous data cleaning exercise took place following the steps below:

- First pre-processing of each email received,
- Consolidation of the data received in different formats (excel, word, text in email format) into several excel templates (from 10,000 rows to 20,000 rows),
- Second pre-processing stage – cleaning spaces and special characters row by row,
- Third pre-processing stage – correcting school names (typos),
- Fourth pre-processing stage – adding the data to the migration tool created by UNICEF which aimed to detect duplicates and prepare data for School Data Sync,
- Matching school names with school data sync identification for each student,
- Creation of user names based on the format requested by MESTI (name.surname@shkollat.org, or name.first letter of parent.surname@shkollat.org),
- Generation of templates as per the requirements from Microsoft School Data Sync,
- Creation of profiles for each batch upload in Microsoft School Data Sync,
- Uploading and treatment of errors shown in Microsoft School Data Sync,
- Modification of the script received from Microsoft for Kosovo and adapting it to generate users for each school,
- Creation of the script for generating unclassified data (users without school)

After completing all the steps above, the consultants were able to create 186,200 unique student digital ID. The accounts were generated in a single excel file for each school using Power Shell and a specific script.

A second data request from schools is planned by the Ministry. To minimise workload, the IT consultants proposed to use a web application or a web form that would automatically correct spaces and refuse or modify special characters.

ANNEX 3.

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