**Final Report**

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**Final Evaluation of the ‘Digital skills and opportunities for youth employment towards digital**

**economy**

**in the Kyrgyz Republic’ project**

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Tommaso Balbo di Vinadio

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## Acronyms

|  |  |
| --- | --- |
| CPD  CSOs  DAC  EAEU  EQ  EU  FGD  ICT  IT  KSTU  MDD  M&E  MoES  NSDS  QA  OECD  OshTU  RF  SCITC  SDGs  TA  ToC  ToR  TOT  UN  UNDP  UNDAF  UNEG  UNICEF | CPD  Civil Society Organizations  Development Assistance Committee  Eurasian Economic Union  Evaluation question  European Union  Focus Group Discussion  Information and Communication Technologies  Information Technology  Kyrgyz State Technical University  Ministry of Digital Development  Monitoring and Evaluation  Ministry of Education and Science  National Sustainable Development Strategy  Quality Assurance  The Organization for Economic Cooperation and Development  Osh Technical University  Result Framework  School Committee Information Technology  Sustainable Development Goals  Technical Assistance  Theory of Change  Terms of Reference  Training of Trainers  United Nations  United Nations Development Program  United Nations Development Assistance Framework Guidance  United Nations Evaluation Group  United Nations International Children's Fund |

# I. Introduction

The project “Digital skills and opportunities for youth employment towards digital economy in the Kyrgyz Republic’ was implemented by UNDP between February 2019 to December 2021 with a total budget of $1,060,000.

The objective of this evaluation report is to share the findings, conclusions and recommendations based on the theory-of-change-based evaluation of the project. The evaluation was both summative, presenting how the theory of change had operated towards results through the reference period, and formative, demonstrating what dynamics prepare the results to ultimately contribute to long term impact, and how future follow-up activities could be framed. The report aims to unpack the lessons learned and recommendations to UNDP as well as local and national duty bearers, the private sector and relevant CSOs.

The evaluation was commissioned and supervised by UNDP and entrusted to Mr. Tommaso Balbo Di Vinadio, International Consultant, Team Leader

The evaluation process was composed of 3 phases:

1. Inception: review of documentation, elaboration of the methodology, identification of stakeholders, consultation with the Reference Group, elaboration of the Inception Report.
2. Data collection and field work: conducting remote data collection (as per standard COVID-19 prevention measures, with a series of interviews, an additional desk-review).
3. Data analysis and reporting: conducting the analysis of interview and focus group notes, analysis of project documentation, report drafting, and finalization of the Evaluation Report.

The evaluation process started on 22 October 2021. It should end 31 of December 2021 as per timeline.

# II. Country context and background

The world is continually changing, and digital transformation is one of its fundamental drivers. Digital transformation refers to the adoption of digital technology to transform services or businesses by replacing manual processes with digital ones as well as replacing outdated digital technology with upgraded digital technology. [[1]](#footnote-2) This affects the global economy and all aspects of people’s lives.

The Organisation for Economic Co-operation and Development (OECD) provides the following unified definition of the Digital Economy: “*The Digital Economy incorporates all economic activity reliant on, or significantly enhanced by the use of digital inputs, including digital technologies, digital infrastructure, digital services and data. It refers to all producers and consumers, including government, that are utilizing these digital inputs in their economic activities*”. [[2]](#footnote-3)

Digital economy creates new opportunities to enhance productivity, income, and social well-being. Job opportunities are created in new markets by increasing employment in some existing occupations. At the same time, boosted production of more goods and services by digital technologies, some workers are exposed to the risk of unemployment or lower wages. These new economic and labour market challenges need to be addressed by governments, businesses, trade unions and academia to benefit of the adoption of digital technologies.[[3]](#footnote-4)

The Kyrgyz Republic endorsed a digital development pathway which is reflected in the National Development Strategy (NDS) for 2018-2040. As part of the NDS, a nationwide digital transformation program "Taza Koom"[[4]](#footnote-5) was launched in 2017. The programme aims to build an open and transparent state, improve the quality of life of citizens, as well as improve conditions for business in the Kyrgyz Republic.[[5]](#footnote-6) This programme was also aligned with digital transformation agenda of the Eurasian Economic Union (EAEU)[[6]](#footnote-7) and aims to promote the achievement of all 17 Sustainable Development Goals (SDGs).[[7]](#footnote-8)

The target of the programme is mainly the youth population of Kyrgyzstan[[8]](#footnote-9). Based on the national statistical committee data, 34.6 percent of the total population are children and adolescents, 57.1 percent are people of working age and 8.3 percent are older than working age (as of beginning of 2021).[[9]](#footnote-10) At the same time, the level of poverty is high in the country. In 2020, nearly 1.7 million people, in other words, every fourth resident of Kyrgyzstan, lived below the poverty line, of which 73.7 percent were residents of rural settlements.[[10]](#footnote-11) Because of COVID-19, at the end of 2020 the poverty rate increased by 11 percent, reaching 31 percent of the population.[[11]](#footnote-12) It is estimated that in 2021, the poverty level in Kyrgyzstan may grow by another 4 percent and reach 35 percent of the population.[[12]](#footnote-13)

The "Sanarip (Digital) Kyrgyzstan 2019-2023", approved by the decision of the Security Council of the Kyrgyz Republic dated December 14, 2018 No. 2, is also a strategic document, which aims: 1) to create new opportunities for the population through the development of digital skills, 2) to provide high-quality digital services, increasing the efficiency, effectiveness, openness, transparency, accountability and combating corruption of the public administration system, increasing the level of citizens' involvement in the processes of making state and municipal decisions through the digital transformation of the state and municipal administration system, 3) to ensure economic growth through the digital transformation of priority sectors of the economy, strengthening international partnerships and creating new economic clusters.[[13]](#footnote-14)

In order to operationalize its Digital Kyrgyzstan digitalisation strategy, the government has set up *Tunduk*, a state-owned Electronic Interoperability Centre. *Tunduk* supported implementation of e-governance and aims to connect all information systems into a single electronic network, including the information systems of government agencies, local governments, and government institutions and enterprises, as well as legal entities and individuals. This system contributes to improving the efficiency of interactions between public authorities at the same time considerably reduces corruption and bureaucratic obstacles for citizens and entrepreneurs through its automated data exchange.[[14]](#footnote-15) Due to optimization purpose, Tunduk together with other several state digital enterprises had been merged to one enterprise.

# III. Brief project description and Theory of Change

## Project description

Within the context explained above, the current UNDP project contributed to creating environment and ecosystems to enhance ICT employability skills of the youth for new employment and entrepreneurship opportunities, and thus reducing inequalities and fostering inclusive and sustainable economic growth and jobs creation in Kyrgyzstan.[[15]](#footnote-16) The core approach applied was around strengthening skills at the level of formal and non-formal education, modernizing education facilities, enhancing teacher qualifications, facilitating best practice exchange and application of innovative instruments, and enabling equal access to education and vocational training for the vulnerable, especially for young women and girls, and persons with disabilities.

The project contributed to UNDAF Outcome 1: By 2022, inclusive and sustainable industrial, agricultural and rural development contribute to economic growth, decent work, improved livelihoods, food security and nutrition, especially among women and vulnerable groups, as well as CPD Results Area 1: Sustainable and Inclusive economic growth with the respective CPD outputs:

* CPD output: 1.1: Policy frameworks and institutional mechanisms enabled at the national and subnational levels for sustainable, resilient, inclusive and gender responsive economic growth.
* CPD Output.1.3: Women, youth and people from the regions with high poverty rate benefit from improved services and infrastructure, better skills, access to resources, sustainable jobs and livelihoods

## Theory of change of the project

This evaluation took a Theory of Change (TOC) based approach, by reviewing the existing TOC (as in, the logic behind the project) and, to the extent possible, reconstructing it so as to determine whether:

* + the envisaged changes identified at project design stage have taken place;
  + the possible contribution of the project to bring about those changes can be confirmed;
  + the assumptions that the project identified were realized or not.

In this sense, the evaluation included a contribution analysis that, on the basis of the TOC, analysed the 3 elements mentioned above.

The TOC also served as the basis for the evaluation team to develop the main evaluation questions that was addressed through a series of data collection and analysis tools (further described below in this report).

The project document included a brief of the TOC and also a table summarizing the main problems, strategies, target constituencies. However, the evaluation reconstructed the TOC so as to better articulate the different pathways for change as well as the assumptions underpinning those pathways. The TOC was visualized (see figure below).

**Figure 1 – TOC of the project**



The TOC of the project was the following:

* *Problem analysis*: the project identified some key challenges related to digital skills development such as lack of proper IT infrastructure, lack of cheap and high-speed broadband internet, low ICT literacy for both teachers and students; and a lack of public-private partnership around digitalization. The project also identified specific beneficiaries and major stakeholders of the project including youth (with a focus on vulnerable groups, but also teachers, private sector and government officials).
* *Inputs:* on the basis of this analysis, the project adopted a combination of approaches based on policy development, provision of training/webinars/online courses, and the furniture of IT infrastructure

Related assumptions of the project were that:

* A proper analysis has been conducted so as to identify the root casus of the challenges around digital skills development;
* The approach envisaged by the project can effectively address some of the major challenges of digital skills development.
* *Short and medium results (outputs and outcomes):* If those assumptions are met, the project expected that the activities implemented would lead to:
  + Drafting and agreeing upon a national digital skills strategy on the basis of which new educational standards and curricula, which will be piloted in 2 high technical schools where professors/teachers would be trained (output). This would, in its turn, result in improving students’ digital capacity (outcome);
  + Conducting a series of online courses, webinars and hackathons as well as developing new (physical) spaces for youth (output). This would, in its turn, result in, again, improving youth (and participants) IT and entrepreneurial capacities but also in strengthening the whole innovation/entrepreneurial ecosystem.

Specific assumptions of the project were that:

* + Government is willing to collaborate and engage.
  + The project is able to effectively reach out to vulnerable groups/women
  + Trainings are properly designed and delivered
  + Project resources are used efficiently
* *Long-term results (impact):* the final expectation of the project is that it would ultimately increase youth employment in the longer term in Kyrgyzstan.

# IV. Approach and methodology of the evaluation

## Purpose, objectives and scope of the evaluation

The objective of the evaluation was to assess achieved results under Project, sustainability of benefits and draw lessons that can contribute to the decision making regarding the further engagement of this issue.

The main purpose of this final evaluation was to assess the programmatic progress, performance of the project interventions from the point of view of relevance, effectiveness, impact, organizational efficiency, sustainability as well as analysis of lessons learnt highlighting areas where the project performed less effectively than anticipated. The findings of the evaluation will contribute to effective programming, refining the approaches, organizational learning and accountability.

## 

## Evaluation criteria and questions

This evaluation had a summative, utilization-focused and equity-oriented evaluation using a theory-based design. Overall, this evaluation used a mixed-method approach.[[16]](#footnote-17) It followed the UNEG norms and standards as well as the guidance, rules and procedures established by UNDP as reflected in the UNDP Evaluation Guidelines. This section aimed to describe in depth the methodology proposed by the evaluation team by first listing the main evaluation questions and by then ide3ntiftying the data collection and analysis tools.

This evaluation was done in accordance with the OECD DAC Criteria for Evaluating Development Assistance, namely relevance, effectiveness, efficiency, sustainability and impact[[17]](#footnote-18):

* **Relevance**: this criterion assessed the extent to which the project objectives address the real problems and the needs of its target groups, country priorities, associated policies and donor priorities. For this evaluation, this criterion allowed the evaluation team to evaluate whether the project goals and approaches and targeting were positioned to be relevant to the needs and priorities of the target groups/beneficiaries;
* **Effectiveness:** this criterion assessed the extent to which the objectives of the intervention have been achieved or are expected to be achieved and whether the intervention had contributed to addressing the key challenges of implementing digital skills;
* **Efficiency**: this criterion assessed the extent to which the project delivered results in an economic and timely way (i.e. by looking at how human and financial resources have been managed);
* **Sustainabilit**y**/Impact[[18]](#footnote-19)**: this criterion assessed the extent to which the results of the intervention continue, or were likely to continue, as well as the financial and contextual catalytic effects. In particular, this criterion looked at the commitment of the Government and other stakeholders to sustaining the results of the project[[19]](#footnote-20)

The evaluation also looked at two cross-cutting themes[[20]](#footnote-21): gender and equity/human rights. Concerning gender, the evaluation assessed the extent to which the project mainstreamed gender in all its activities, whether women and girls benefited equally from the project activities. The evaluation also assessed whether the project integrated equity/human rights principles into its outputs.

The evaluation developed 4 main evaluation questions and a series of sub-questions per each evaluation question. It should be noted that those questions cover both the ‘hierarchy of results’ and the ‘main assumptions’ of the project depicted in the TOC. The evaluation questions have been developed on the basis of the TOC and on the basis of the suggestions made in the TORs[[21]](#footnote-22).

The table below presents the main questions and the related sub-questions on the basis of the OECD DAC evaluation criteria.

**Table 1. Questions and sub-questions on the basis of the OECD DAC evaluation criteria**

*Relevance*

|  |  |
| --- | --- |
| **Main question** | |
| 1. How relevant was the project in identifying the main challenges related to digital skills and in addressing the needs and priorities of the beneficiaries, as well as the national and donor priorities in Kyrgyzstan? | |
| **Sub-questions** | **Judgment criteria** |
| 1.1 To what extent was the design of the project appropriate for achieving the desired objectives? | * Project design (and TOC) is based on a solid analysis – it addresses clearly some of the key challenges of digital skills development * Project is developed on a sound TOC – the hierarchy of results are clear and the related assumptions are based on evidence * Project document builds on the literature on digital skills development - occurrences of mentions to literature on digital skills development * Coherence between outputs and activities is solid |
| 1.2 To what extent was the project based on a sound understanding of the different needs of young women and men? | * % of young women and men perceive the project as relevant for their needs (including vulnerable groups) * The project team conducted participatory workshops to develop the project - number of youth that have been consulted on or associated with the drafting and design of the project (including vulnerable groups) * Adjustments that the project has made as a consequence of the COVID-19 situation are clearly justified so that it remains relevant to the new beneficiaries’ priorities |
| 1.3 To what extent is the project consistent with key national strategies, including in the area of digital transformation? | * Project objectives are aligned with relevant institutions policy objectives and with UN strategic document for Kyrgyzstan |

*Effectiveness*

|  |  |
| --- | --- |
| **Main question** | |
| 2. To what extent did the Project achieve its intended objectives and contribute to the project’s strategic vision? | |
| **Sub-questions** | **Judgment criteria** |
| 2.1 To what extent have the project’s results been achieved in terms of:   * + - Enhancing the capacity of formal education to better prepare youth for digital economy;     - Creating partnerships with private sector ;     - Creating spaces and opportunities for youth to be more innovative and entrepreneurial? | * Evidence shows that objectives are met at output and outcome level through:   + Number of concrete deliverables to strengthen the formal education system   + Number of participants in the activities of the project (i.e. teachers, youth)   + Perception of the beneficiaries and stakeholders reporting that the project has been effective   + Increased capacity of beneficiaries in digital skills (i.e. teachers)   + Examples of empowering women (also from vulnerable groups) as they better understand benefits of digital technologies and are motivated to use them   + Causal linkages in the reconstructed TOC are verified by project results   + Number of instances where TOC was used to verify causal linkages and assumptions during the implementation of the project |
| 2.2 To what extent the project was flexible and adaptive to the context especially given COVID-19? | * Clarity of mentions for changes to the timeframe, content of the project activities or reallocation of funds also related to the consequences of COVID-19 |

E*fficiency*

|  |  |
| --- | --- |
| **Main question** | |
| 3. How efficient was the project in using its resources to achieve its objectives? | |
| **Sub-questions** | **Judgment criteria** |
| 3.1 Have funds and activities related to project been delivered in a timely and resource appropriate manner? | * % activities that have been planned and completed on time * % of budget that has been disbursed VS timeline * Number of stakeholders interviewed who perceive the financial and human resources to be adequate for achieving the results of the project in the given timeframe |
| 3.2 To what extent was the governance set-up appropriate to achieve results? | * Stakeholders interviewed who perceive Project board to have provided clear guidance |
| 3.3 To what extent were the monitoring mechanisms in place effective in measuring and informing management of the project performance and progress towards the targets? | * Project indicators coincide with the TOC of the project * Number of examples of reaction and adaptation of action according to monitoring findings * Evidence of use of SMART indicators in the logframe and project reports - data collection/reporting is based on SMART indicators |

*Sustainability/impact*

|  |  |
| --- | --- |
| **Main question** | |
| 4. To what extent the project results are likely to be sustained over time? | |
| **Sub-questions** | **Judgment criteria** |
| 4.1 How effectively has the project generated national ownership and capacity to continue implementation of the results achieved? | * Instances of plans and strategies developed by the government that integrate digital skills development * National counterparts report they are willing and capable to continue the implementation of the project activities |
| 4.2 How likely is it that the results of the project will sustain after its end? | * Capacity and willingness of teachers to apply new educational standards * Capacity and willingness of private sector to work with public sector * Ecosystem in the country is appropriate for entrepreneurship and for developing startups * Evidence and examples of interventions that are being implemented/have been implemented without support from project |

A more detailed evaluation matrix (Annex 2) was prepared in order to specify the main questions and to relate the key evaluation questions to the approaches and sources of information to be used in answering them.

## Evaluation design (method of data collection and analysis)

Data for this evaluation was gathered through a mix of qualitative and quantitative tools, which complemented each other for the sake of triangulation in order to increase the credibility of the findings.

The evaluation used those tools following the sequence described here:

1. *Desk review*: the consultant first undertook a desk review with the main purpose of providing an overview of:
   * how the project was designed and its relevance towards national plans and strategies and youth needs
   * the coherence of the project
   * whether results pathways of the project and its assumptions have been realized and whether there are indications for the results to be sustained over time
   * the budget and financial data of the project

The main documents that were reviewed:

* + project-related documents (i.e. project document, quarterly and annual progress reports, internal documents of UNDP)
  + general strategic documents of the Government of Kyrgyzstan (i.e. national strategies)
  + any other relevant material produced by the project (i.e. educational standards)
  + presentations and minutes of the project board

1. *Semi-structured interviews with stakeholders and beneficiaries*:the consultant undertook a series of interviews with selected project stakeholders (UNDP, private sector, academia and government agencies) to gather additional information from key people who have been involved in the design or the implementation of the project so as to start verifying the information gathered during the desk review. Annex 3 shows the generic guidance that the consultant followed during interviews.
2. *Additional desk review*: the consultant also reviewed additional documentation after he conducted the interview to confirm or to fill in some information gaps.

To comply with COVID-19 procedures, the interviews and FGDs were conducted online.

Concerning data analysis, the evaluation used the following tools:

* **Analysis of TOC and contribution analysis**: as mentioned above, the consultant analyzed the existing TOC and produced a reconstructed TOC, which were used to verify the ‘hierarchy of results’ as well as the ‘assumptions’. To do so the consultant used a contribution analysis to help unpack the pathways for change and the underpinning assumptions. In particular, the contribution analysis:
  + identified the expected changes that the project wanted to have (TOC)
  + gathered existing evidence to test the theory of change and
  + checked whether the changes the project had brought about could be considered as a contribution from the project activities by developing a contribution narrative
  + in case, gathered additional evidence if there were gaps in the contribution narrative

* **Content and qualitative analysis:** this analysis was applied to the review of the documentation related to the project (i.e. documents on M&E, finance) as well as to the interview responders. The evaluation collected qualitative information from both the review of the documentation related to the project and the interviews responses and stored the data in a shared folder. Then, it reviewed and coded information by developing categories and subcategories.
* **Triangulation and complementarity:** Data triangulation provided a more complete analysis of the data and it ensured a higher credibility of the evaluation findings.

The whole sequence of data collection methods aimed to ensure triangulation and complementarity of data:

1. document review identified the most important issues;
2. those issues were then investigated more in depth and the findings confirmed or not through interviews

IV. Ethical issues and limitations to the evaluation

The evaluation was carried out following UN Evaluation Group (UNEG) Norms and Standards (see http://www.unwomen.org/about-us/accountability/evaluation/) as well as the Ethical Guidelines for evaluations in the UN system available at <http://www.unevaluation.org/papersandpubs/>. The UNEG Code of Conduct was an integral part of this evaluation upholding key qualities such as independence, impartiality, honesty and integrity, competence and accountability, among others. Confidentiality was also an integral part of the evaluation, ensuring stakeholder’s rights to provide information in confidence while ensuring sensitive information could not be traced to its source. The Evaluation followed the UNEG Ethical Guidelines and Code of Conduct. The UNEG Code of Conduct notes the importance of ethical conduct for the following reasons:

1. Responsible for use of power: All those engaged in evaluation processes are responsible for upholding the proper conduct of evolution;

2. Ensuring credibility: With a fair, impartial and complete assessment, stakeholders are more likely to have faith in the results of the evaluation and to take note of the recommendations;

3. Responsible use of resources: ethical conduct in evaluation increases the chances of acceptance by the parties to the evaluation and therefore the likelihood that the investment in the evaluation will result in improved outcomes.

Specific safeguards put into place include the following:

* + - 1. All those interviewed were informed of their right to privacy and confidentiality;

1. Data collection tools were designed in a way that are culturally appropriate and would not create distress for respondents;
2. The interviewer was able to provide information on how individuals in situation of risk can seek support.

The evaluation principle of independence is very important. As such, this evaluation had the final judgment on the findings, conclusions and recommendation of the final evaluation report.

The evaluation deployed a mitigation strategy in the inception report that, in part, overcame some of these challenges by:

• Complementing the data on the results of the project by reconstruing the TOC so as to better clarify the pathways of the project towards its objectives and triangulating different and several sources of data. In this sense, the evaluation developed a methodology that gathered sufficient evidence to validate or not project assumptions and show the results according to the TOC.

• Complying with COVID-19 regulations and restrictions by using video calling technology as well as more traditional tools (traditional calls) to conduct interviews.

# V. Analysis - Findings

This section is organized around a chapter for each evaluation criteria: relevance, effectiveness, efficiency, and sustainability/impact.

## Relevance

**Main question 1:** To what extent were the project results relevant to the needs and priorities of the beneficiaries, as well as the national and donor priorities in Kyrgyzstan?

**Sub questions:**

1.1 To what extent was the design of the project appropriate for achieving the desired objectives?

1.2 To what extent was the project based on a sound understanding of the different needs of young women and men?

1.3 To what extent is the project consistent with key national strategies, including in the area of digital transformation?

This section addresses the main questionand sub-questions related to the relevance criterion.It shows: how the project was designed based on an appropriate understanding of challenges on digital skill development (finding 1); that, based on that, the project devised a solid approach on both formal and informal education (finding 2); that the project was based on a good understanding of youth (finding 3); and, that finally the project was also developed in line with the main UN and government strategic documents (finding 4).

**Finding 1. The design of the project was anchored on an appropriate understanding of some of the challenges related to digital skill development – however, there was no rigorous assessment done to evaluate digital skills for youth in the country**

The project provided a strong rationale for its design as it was developed based on a very important need of the country (to develop digital skills and competencies of youth) and it was built upon some of the main findings of the growing literature on digital transformation, digital skills development, and digital entrepreneurship. The conception of the project was also based on the analysis of the general social and economic situation in the country, the employment situation of the young people and the related skill mismatch in the labor market.

Overall, the project adequately highlighted the following elements that are the basis for its conception:

* *Nexus between digitalization and youth employment*: the project showed how important it is to invest in youth as Kyrgyzstan has a rather young population (median age is 24 years, and people of working age constitute 60% of the total population) but whose potential is still untapped. The project indeed showed that there is a high level of unemployment of youth and that digitalization could actually offer some very strong opportunities to be seized by youth.
* *The link between education and digitalization*: if digitalization could indeed offer important opportunities, the project made the case that ‘education’ should be considered as the main entry. Indeed, the project showed how profound the digital skill mismatch is and how important it is, therefore, to invest in digital skill development. The project main assumption (from the reconstructed TOC) was indeed that by investing in improving the digital competencies and skills of youth they will be able to access the market easier and find employment opportunities.

*Quote*

*Investing in youth is highly relevant and timely for the country. Also, if we invest to improve their digital competencies so that they will be recruited as the market needs those competencies, there is also some hope that we can even lowering risk of radical extremism and terrorism (interview with UN staff)*

Based on those considerations, the project in cooperation with its partners, identified some of the specific challenges related to youth digital skill development in Kyrgyzstan as follows:

* + the mismatch between the needed 21st century skills demanded by the market and the courses offered especially by public universities[[22]](#footnote-23)
  + the large number of job opportunities missed because of this mismatch[[23]](#footnote-24)
  + inadequacy of graduates’ practical knowledge[[24]](#footnote-25)
  + inadequacy of teachers’ knowledge on IT
  + outdated IT infrastructure in universities
  + more broadly, lack of a strategy on digital skill development and inefficiency of regulatory framework

Those challenges were backed by evidence as the project conducted a series of analyses (see effectiveness part as well):

* The study of digital skills and digital entrepreneurship in Kyrgyzstan was conducted in 2019[[25]](#footnote-26).
* “Comparative analysis of the electronic commerce development in the Russian Federation (and the Kyrgyz Republic”[[26]](#footnote-27), with recommendations for the Kyrgyz Republic.
* Report on “Establishing closer contacts and creating network on digital skills mismatch by exchanging of information between public and private sector and between industry and education”[[27]](#footnote-28)
* “Digital skills for digital economy”[[28]](#footnote-29) report
* The project also reported that field market research study was conducted in all regions of the country on Kyrgyzstan’s innovation ecosystem and digital entrepreneurships to identify development opportunities.[[29]](#footnote-30)

However, it should be noted that these studies could have been conducted before the project design, so as to fully articulate the needs of the young people, to generate relevant information, and to better assess the risks. This was also mentioned in some of the documentation reviewed (for instance, Project progress report 2019[[30]](#footnote-31)).

Those analyses also do not provide a rigorous assessment on the level of digital skills (‘literacy’) of youth in the country, which could have provided a stronger baseline for the project. A report reviewed by this evaluation[[31]](#footnote-32) highlights, indeed, that Kyrgyzstan has not participated in international studies on the level of digital literacy.

On a different note, it is commendable that the project did not only try to identify some of the specific challenges to digital skill development but it also contributed to sparking a discussion on the broader role of education in Kyrgyzstan.

*Quote*

*We need to rethink the role of universities and high education in the country. In practice there are 4 generations of education. 1 – based on Soviet standards, 2nd generation – education based on research, 3rd generation: education, research and innovations. 4rth generation: education, research, innovation, and entrepreneurship. The project is one of the first attempts to tackle the 4th generation*

**Finding 2. The project approach (especially for the first component) was appropriate to address (some of) the problems identified at design stage related to digital skill development**

The evaluation found that the project appropriately linked its intended objectives with some of the problems of digital skills development for youth identified in the reconstructed TOC. The TOC explicitly linked youth with economic growth through digital skill and competences development.

As mentioned above, to address some of the challenges identified on digital skill development, the project employed an educational approach that intended to work on both formal and informal education. It is indeed very commendable that the project recognized the potential of informal education as a key to also develop youth digital skills and competencies[[32]](#footnote-33).

*Quote*

*Design of the project was done to target students in high education, and those who are involved in formal education however, now Kyrgyzstan shows that in order to receive these skills, you don’t have to be involved in formal education. Even kids from school – start learning coding through informal education.*

Based on the challenges identified, the project devised an approach to: 1) re-define the function of universities; 2) reform and optimize the higher education system in accordance with the market demand and future expected trends; 3) prepare the teaching standards and education programs related to digital skills and competences[[33]](#footnote-34); and 4) introduce new legislative basis for the above-mentioned standards.

The approach of the project is to be considered appropriate and coherent. For instance, the project decided to focus, firstly, on teacher development so as to have an ultimate impact on student learning outcomes.

*Quote*

*The quality of education mostly depends on the skills of teaching of teachers and the desire of students to learn (interview with university staff)*

*Quote*

*We worked with teachers from secondary schools. This is also very important because without having teachers with necessary basic skills on digital education, it would be impossible to improve quality of digital education at secondary schools (interview with UN staff)*

The evaluation also considers appropriate the support that the project wanted to provide on innovative ‘physical’ spaces (the IThub in Osh). The logic of the project to do so was not only to contribute to the final result of improving the digital capacity of youth but also to contribute to strengthening the digital economy of country through nurturing start-ups and entrepreneurs.

As mentioned above, the approach was also in line with how the focus the government has been giving to the ‘new’ role of education. In recent years, the Ministry of Education of the Kyrgyz Republic has been actively introducing competency-based education in the framework of the "Education Development Strategy 2012- 2020". At the state level, the skills development is based on a competency-based approach in the course of the formation of a new generation subject standard. In the competency-based approach, the emphasis is not on memorizing information, but on the use of acquired knowledge in different life situations. Taking into consideration of these developments, the project could be considered as innovative as it proposed on the new redefined role of university and 21st century skills.

**Finding 3. Project design was based on a good understanding of the needs of youth – however the focus on vulnerable groups (youth and women) is not really evident**

The evaluation found that the project appropriately addressed the needs of the main beneficiaries of the project – youth. The project design was based on a good understanding of the general needs of the young people in the country, which is evident from the project document and implementation strategies employed. Based on the needs on the young population, the project focused on their skills development through the 1st (in formal settings) and the 2nd component 2 (non-formal education setting).

*Quote*

*IT programs are highly requested by university students yet we did not have many to offer to them. Luckily, this project is addressing this need (interview with academia)*

*There is lots of demand for programmers and students would love to do that. This project is helping them get the skills to finally be able to apply for those jobs (interview with academia)*

It should be noted that however, the evaluation found only anecdotal evidence that youth participated in the design and implementation of the project

*Quote*

*When we had trainings for teachers, we also invited graduate students – so that they could participated as well (interview with UN staff)*

**Finding 4. Project objectives were well aligned with both national strategies and UN key strategies for Kyrgyzstan**

The government has developed and approved a five- year strategy for Sanarip Kyrgyzstan to achieve the long-term sustainable development goals in the digital space. President Jeenbekov has declared the third year of the 5-year Sanarip Kyrgyzstan stratify as the “Year of Development of Regions and Digitalization of the Country." Digitalization is becoming one of the most important priorities of the government and, as a consequence, investing in digital development skill is also a priority.

The goals and objectives of the project are consistent with the UN Sustainable Development Goals 2030. The project was well aligned with the existing national priorities and regional strategies, UN key strategies and SDG 2030 goals as follows:

*National level priority documents*

* National Development Strategy (NDS) for 2018-2040, which defines the construction of a digital government as a cornerstone of the country's future. In this regard, since 2019, the five-year program “Sanarip Kyrgyzstan” has been implemented. One of the main components is the digital transformation of the state, digitization of internal business processes, the provision of all governmental and municipal services electronically.
* As part of the NDS, a nationwide digital transformation program "Taza Koom" (2017). The programme aimed to build an open and transparent state, improve the quality of life of citizens, as well as improve conditions for business in the Kyrgyz Republic. It was modified and resulted in digital transformation programme Sanarip Kyrgyzstan.
* A concept of digital transformation "Sanarip Kyrgyzstan 2019-2023", approved by the decision of the Security Council of the Kyrgyz Republic dated December 14, 2018 No. 2
* The Government of Kyrgyzstan Mid-term strategy 2018-2022 “Unity, Trust, Creation.” It was replaced recently by the new mid-term national development programme 2021-2026 endorsed by President S. Japarov in late 2021.

*Regional documents*

* Digital transformation agenda of the Eurasian Economic Union (EAEU)

*UN documents*

* Sustainable Development Goals (SDGs) - Digital skills development is an important component in achieving the Millennium Goals
* UN Digital by Default (<https://www.undp.org/blog/digital-changing-development-undp-changing-too>)
* UNDAF document[[34]](#footnote-35)(Outcome 1)

During the interviews it was also confirmed that the project fully corresponded to the government’s vision of the digital transformation of the country. Within this transformation, the digital skills development of the population is the main focus

*Quote*

*As mentioned in the minutes of project related meeting, representative of the government stated that this project fully corresponded to the ministry vision (interview with the government )*

## Effectiveness

**Main question 2:** To what extent did the Project achieve its intended objectives and contribute to the project’s strategic vision?

**Sub questions:**

* 1. To what extent have the project’s results been achieved in terms of:
     + Enhancing the capacity of formal education to better prepare youth for digital economy;
     + Creating partnerships with private sector;
     + Creating spaces and opportunities for youth to be more innovative and entrepreneurial?
  2. To what extent the project was flexible and adaptive to the context especially given COVID-19?

This section addresses the main questionand sub-questions related to the effectiveness criterion. The reconstructed ToC shows that the project expected that the activities implemented would lead to:

* Drafting and agreeing upon a national digital skills strategy on the basis of which new educational standards and curricula, which will be piloted in 2 schools where teachers would be trained (output). This would, in its turn, result in improving students’ digital capacity (outcome);
* Conducting a series of online courses, webinars and hackathons as well as developing new (physical) spaces for youth (output). This would, in its turn, result in, again, improving youth (and participants) IT and entrepreneurial capacities but also in strengthening the whole innovation/entrepreneurial ecosystem.

The final expectation of the project is that it would ultimately increase youth employment in the longer term in Kyrgyzstan.

The section below is, therefore, structured as follows:

* Finding 5: There is substantial evidence that the project achieved very concrete results (output level)
* Finding 6: It is, however, too complex and early for this evaluation to verify the project outcomes and its long-term results
* Finding 7: The project proved to be rather flexible during implementation and was also able to use the pandemic as an opportunity to strengthen its impact

**Finding 5. The project was able to achieve very concrete results - all the outputs were met and the project even exceeded its targets for some of the indicators**

The evaluation found solid evidence that the outputs of the projects were achieved, especially regarding the 1st component[[35]](#footnote-36). This is confirmed by the review of the documentation and through the interviews with the main stakeholders.

Table 2. Progress table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Outputs** | **Output indicator (RF)** | **Target (RF)** | **activity** | **Change (output/indicator/activity)** | **Final result** |
| Component 1. Improved digital skills development in the system of formal education | | | | | |
| 1. Improved digital skills development in the system of formal education | 1.1 Approval of the National Digital Skills Development Strategy | NDSDS approved and implemented | * 1. Series of in-depth market studies and consultations with the private sector and experts on the global trends on digital markets, digital jobs, and recommendations on the required set of skills that will contribute to the country’s digital development, with additional focus placed on digital technologies and innovations in the priority sectors of the economy | To amend the Results Framework of the project document with the transfer of key project activities from 2019 to 2020 to speed up and complete all project activities in 2021.  According to numerous consultations with educational, legal and state experts, to work with 1-2 standards in one sector within the project budget. To choose one faculty of information technologies for work, as well as introduce the 4th generation of education at the faculties of information technologies in KSTU and OshTU using the experience of the Russian Federation and other countries. Given the co-financing in the amount of $2.2 million from the Government of the Kyrgyz Republic within the framework of the World Bank Project DCASA Kyrgyzstan as a contribution of the project “digital skills and opportunities for youth employment towards digital economy in the Kyrgyz Republic” funded by the Russian Federation to amend the monitoring indicators: In the project doc Results Framework on pp 19-20 in the indicators of expected results:   1. In paragraph 1.1. it is stated, “National Strategy of Digital Skills Development are approved by the Government Decree”. It is proposed to change this paragraph to: “Develop and introduce the national Strategy of Digital Skills Development with recommendations for the consideration to the MoES” 2. In paragraph 1.4. it is stated, “100% student employment after graduation”. It is proposed to change this paragraph to: “Non-formal education includes recommendations based on recently developed educational standards and training programs for the training of at least 500 participants”. | NSDSD developed and sent to review of MES |
|  | 1.2 # of students participated at the new training programmes | Year 1 – 500  Year 2 – 700  Year 3 – 700  Final - 1900 | * 1. Support the formulation of the national Digital skills development strategy and roadmap, including identifying current and future digital skills needed and goals, ideally across sectors. | 1.2 National strategy was completed in Dec 2020, report was provided  National Strategy on digital skills and competencies and roadmap draft was cleared by MoES and it is under final endorsement of the President Office  3 new education standards developed |
|  | 1.3 % of girls participated at the new training programs  1.3 # of teachers with increased capacity on new digital skills development | Year 1 – 10%  Year 2 – 20%  Year 3 – 30 %  Final 30%  Year 1 – 20  Year 2 – 20  Year 3 – 20  Final – 60 | * 1. Upgrading educational standards and curriculum for building fundamental and emerging digital skills to meet the growing demand of the digital economy, including digital inclusion standards for disabled and girls | Upgrading educational standards and curriculum activities were completed in Dec 2020, a report was provided  In 2021  88 university teachers trained |
|  | 1.4 # of students employed after graduation | Year 1 – 80%  Year 2 – 100%  Year 3 – 100%  Final – 100% | * 1. Introducing and piloting new educational standards and curriculum at the Kyrgyz State Technical University named after Razzakov (Bishkek) and Osh Technical University named after Adyshev (Osh) and their subordinated vocational-technical colleges and institutions based on agile approach | TOT activities were completed in Dec 2020, a report was provided.  Improved, connected and integrated existing systems with educational services are used and disseminated among other institutes and colleges under KSTU and OshTU:   * Google G-Suite for Education * Microsoft 365 for Education * International education service “eduroam”   Additional 3 (International Ala-Too University, Chui University and private high school) private universities were connected to the Oracle Academy and at least 1000 students and 50 university teachers benefited from that practice.  After 4 years graduation |
|  |  |  | * 1. Modernization of equipment and the introduction of new ‘digitalized’ teaching standards at the Kyrgyz State Tech University and OshTU and their subordinated technical colleges and institutions, including in apparel sector. | Modernization of equipment activities were completed in Dec 2020, a report was provided.  Project will continue launching Accelerator Labs for KSTU and OshTU as soon as tender will be finalized on delivering computers. |
| Component 2. Established ITHub in Osh City for young entrepreneurs and application of new learning models in non-formal educational settings | | | | | |
| Established ITHUBOsh in Osh City for young entrepreneurs and application of new learning models in non-formal educational settings | 2.1 Fully operational IT hub in Osh province with # of full-time residents | Year 1 – 50  Year 2 – 100  Year 3 – 200  Final – 200 | 2.1  Contributing to strengthening the infrastructure and institutional capacity of IThubOsh to serve creative space and new generation incubator to foster digital innovations, provide workspace, seed funding, access to new financing mechanisms, mentoring support, and other support services | It is necessary to improve and develop the recently launched LMS platform [www.digiskills.kg](http://www.digiskills.kg) of State Committee for Information technologies and Communication (SCITC), develop training materials on e-commerce, Internet marketing, YouTube and all other sectors related to e-business which will be continued as part of the World Bank project DCASA-Kyrgyzstan. In the project document Results Framework on pp 20-21 in the indicators of expected results:   1. In paragraph 2.1 of the second component it is stated: “The current IT hub in the Osh region with 200 permanent residents”. Given the real market of this sector observed in Bishkek, it is proposed to change this paragraph to: “a fully functioning IT center in the Osh region with a minimum of 50 permanent residents in the short term.” 2. Accept the proposed changes within the project budget for 2020, namely:  * Change the project budget for 2020 supporting expenditures by $25,000 for the implementation of the new activity 2.7 “support of the national program “digital Kyrgyzstan” with the reallocation funds from Components 1 ($!5,00) and Components 2($10,000): a) in cooperation with the President’s Administration to hold the event Live Broadcast of Communication between the President of the KR and the Regions”, b) Support the nationwide event “digital Alippe” on digital skills trainings. | IT Hub in Osh   1. Due to sustainability and competencies, it was decided to work with the CSO “Welcome KG” Osh. Ololo Osh offered a 986m2 building in the center of the Osh city 2. IT Hub will be established in close partnership with:    * Osh CSO Welcome.kg and the State High Technology Park, in close partnership with Ololo group. 3. We plan to launch both physical and virtual IT Hub in Osh in the last quarter 2021.   After renovation in 2021 |
|  | 2.2 # of participants of hackathon events | Year 1 – 100  Year 2 – 1000  Year 3 – 2000  Final - 3100 | 2.2. Supporting a series of hackathon/hackfest events to engage young computer programmers, interface designers, private-sector project managers, and subject-matter experts to collaborate on the designing of new business scalable solutions and software products; | All digital activities were completed in December 2020, a report was provided  Training contents in Russian and Kyrgyz were developed on YouTube and Blogging and conducted online trainings for 847 participants, 445 are men and 360 and women and girls. As a result, 304 participants were technically supported. 33 finalists started to earn money (11 women, 22 men). 2 of them showed their patent certificates.  Participated 11730 |
|  | 2.3 # of youth trained at IThubOsh | Year1 – 200  Year 2 – 500  Year3 – 500  Final 1200 | 2.3 Facilitating intensive knowledge exchange and masterclasses that will engage digital-savvy experts from Skolkovo, Kazan Techno Park and other global creative spaces to bring advice and tips for starting a digital business and establishing business models for scaling business-lead technology solutions | The project developed report on “Comparative analysis of Technological Trends development in Russian Federation and the Kyrgyz Republic with recommendations for Kyrgyzstan” and conducted following webinars together with the High Technology Park <https://www.facebook.com/HTP.KG>. Participants were SME representatives, agribusiness association members, students and other interested people. 165 people participated  Trained 11730 + 4000 youth (coursera) |
|  | 2.4 % of girls participated in the IT courses | Year 1 – 50%  Year 2 – 50%  Year 3 – 50%  Final – 50% | 2.4 Carrying out targeted country-wide awareness-raising campaigns for identified target underprivileged groups, with focus on rural girls, young women and youth with special needs, to inform about benefits of digital technologies and digital skills, and to encourage the use of digital services; | 50% participated |
|  | 2.5 # of teachers trained at iTHUbOsh | Year 1 – 25  Year 2 – 50  Year 3 – 0  Final 75 | 2.5 Establishing closer contacts and exchange of information between public and private sector and between industry and education to address skills mismatch. Encourage and facilitate digital skills internships in the companies | 256 teachers trained |
|  | 2.6 % of youth employed after graduation | Year 1 – 80%  Year 2 – 100%  Year 3 – 100%  Final – 100% | 2.6 Capacity building of new generation of IT teachers and raising awareness of new learning methods, including designing and prototyping new learning products for girls and youth with special needs | TOT activities were completed in December 2020, a report was provided  World Bank project implementation unit under the Ministry of Education and Science continued conducting TOTs that UNDP’s developed contents for all 58000 schoolteacher in the country.  In process |

The project achieved the following major results under the 1st component:

* *A series of in-depth market studies were produced and consultations were held around digital skill development*. The evaluation considers this one as a very important result of the project as it was used as a basis for developing other results. Indeed, as highlighted in the relevance section, the project adopted an appropriate sequencing of activities that made this component rather coherent by first conducting a series of researches, market studies and consultations with the private sector and experts on the required set of skills that will contribute to the country’s digital development. Those studies helped inform the development of the national strategy on digital skill development, the establishment of the educational standards and other activities of the project. For instance, the progress report (2019) states that ‘the purpose of this study [[36]](#footnote-37) was to provide an expert review of the level of digital skills and digital entrepreneurship in Kyrgyzstan. The product of this work is designed to help the Government of the Kyrgyz Republic, development partners and all stakeholders involved understand the role of innovation technology, the stages of access to digital technology, digital skills and develop the necessary initiatives and programs to achieve the target indicators within the framework of Sanarip Kyrgyzstan and the SDGs’.

As mentioned in the relevance section, this evaluation found, however, that those studies (such as the ‘Digital skills and entrepreneurship in Kyrgyzstan’) could have been conducted before the start of the project so as to give more information that the project could have used to better define its activities and results. Also, it is important to note that the evaluation did not find evidence that those analyses[[37]](#footnote-38) put forward or devised a specific digital skill framework for Kyrgyzstan – indeed, while some reports do refer to good practices in this area (such as the digital framework developed by the EC), there seems not to be specific recommendations on how to adapt those frameworks for Kyrgyzstan.[[38]](#footnote-39)

* *The National Strategy on Digital Skills and Competencies and Roadmap draft was cleared by MoES and it is now under final endorsement of the President Administration*. The project helped draft the strategy on digital skill development for the first time in the history of the country. The evaluation reckons that this is another major achievement of the project, one that is, at the same time, really important and needed for the country. This was confirmed by the majority of the stakeholders interviewed. This document is also extremely important as it built the foundation for the other activities of the project.

From a review of the strategy, however, this document is rather broad and there is no specific mention about:

* The baseline in terms of the level of digital literacy in the country and the main challenges regarding digital skill development
* The specific competencies and skills that youth in the country should develop (this point is mentioned above when discussing the lack of a specific digital framework for the country)
* *3 educational standards and curricula were developed with the Ministry of Education and Science and tested in 2 universities.* The project facilitated the development of the new educational standards by hiring a group of consultants – including lawyers, educational experts, IT experts[[39]](#footnote-40). The project also helped the MoES to test those standards and curricula at the Kyrgyz State Technical University named after I. Razzakov (Bishkek) and Osh Technological University named after M.M Adyshev (Osh. Those universities received also IT equipment[[40]](#footnote-41) and TA in particular for professors/teachers so that they could efficiently and effectively run the new curricula.

It is important to note that the TA and equipment was provided by the project on the basis of an appropriate understanding of the specific needs of those universities. The project indeed conducted an assessment of the specific needs of Kyrgyz State Technical University and Osh Technical University so that the new digitalized teaching standards could be applied effectively[[41]](#footnote-42).

Regarding the 2nd component[[42]](#footnote-43), the project did achieve some very concrete results with, however, some challenges concerning the activity related to strengthening the IT hub in Osh.

The project was able to achieve the following major results:

* *A series knowledge events such as masterclasses as well as hackathons with young people were conducted*. As part of the project, a multitude of events were held with the objective for participants to share knowledge, learn new IT related subjects but also to design new business scalable solutions and software products. More than 11,730 people participated in digital events. It should be noted that this is well above the original target set in the RF (which was 3,100 for people participating in hackathons and 1,200 for youth trained)[[43]](#footnote-44). Also, 4,000 people subscribed to free online courses on Coursera that were also promoted by the project.

As far as the knowledge events, webinars and masterclass, those activities included the participation of digital-savvy experts from Skolkovo, Kazan Techno Park and other global creative spaces to bring advice and tips for starting a digital business and establishing business models for scaling business-lead technology solutions. The objective was for participants to exchange knowledge, to learn new and epsecigic subjects (i.e. e-commerce) but also to discuss wider topics such as Creation of a unified digital platform for innovators - the experience of the Moscow innovation cluster.

It is also very commendable that the project included the participation of 50% of girls in the IT courses, which was exactly what the project intended to do

* *Some awareness-raising campaigns were conducted.* The objective was to explain the benefits of digital skills and technologies and a report was produced on the exchange of information between public and private sector about skills mismatch and digital skill development. The project financing the development of a series of short video and films on digital champions to promote digital entrepreneurship and digital economy among youth

However, it should be noted that the evaluation did not find sufficient evidence on how the project targeted underprivileged groups, which was one of the objectives of this activity

The project also financed the publishing of on “establishing closer contacts and exchange of information between public and private sector and between industry and education to address digital skills mismatch’.

* *TOTs for 256 secondary schoolteachers were developed contents with all Advanced Studies and Retraining requirement*s.

As mentioned in the relevance section, the improvement of IT capacities of secondary school teachers was also rather needed for the country. However, it is not clear from the documents whether the number of school teachers that were trained was 256. Also, it is not clear whether and how the project designing and prototyping new learning products for girls and youth with special needs.

* *Strengthening the IThub in Osh[[44]](#footnote-45) (in progress)*. Concerning the activity 2.1 of the second component, which was the most consistent in terms of budget for the whole project, the project faced several challenges and delays.

According to the interviews with the stakeholders, the 2 main problems were as follows:

* The project tried to engage with the municipality as they wanted to be involved in implementing this activity and the project was keen to get their engagement. However, because of municipality administration changes and political instability it was indeed rather difficult for UNDP to cooperate with them to run this activity smoothly;
* The project had initially identified OLOLO house as the main partner that could implement this acidity (it was mentioned in the project document). However, there were several problems especially related to UNDP procurement process that did not allow for the organization to preselect a company, even if it was the best qualified to conduct the activity. The better solution was found and UNDP has entered into agreement with local NGO “Welcome KG.”

*Quote*

*UNDP needs to work with the private sector but it has to still learn how to do that. We found that working with NGO is easier and it is easy way to get access to private sector (interview with UN staff)*

Overall, the level of satisfaction for the results mentioned above is rather high from the main stakeholders interviewed - there is wide agreement from the diverse set of stakeholders interviewed that the project achieved important results.

*Quote*

*When it comes to programmatic advantages, I think the first component activities were really successful, including strategy for digital skill development (interview with UN staff)*

The 2 universities that were targeted by the project felt that the project adequately addressed specific needs they had in term so of capacity development and upgrading standards

*Quote*

*helped us to establish cooperative email, Microsoft, and connect to edu.run which helps to connect universities. So, we significantly improved our technical capacities (interview with staff from university)*

*Quote*

*We really want to thank UNDP as the project was what we needed as it helped us update the IT equipment, train teachers, improve educational programs and state educational standards in the area of IT (interview with staff from university)*

**Finding 6. It is too complex and early for this evaluation to verify the project outcomes and its long-term results that are illustrated in the reconstructed TOC**

The reconstructed TOC identifies 2 expected longer-term results at the outcome level:

1. For the students to be able to acquire digital skills/competencies (formal education);
2. For the overall innovation/entrepreneurship ecosystem (outside formal education) to be improved by:
   * Helping young people to develop solutions and possible starting a digital business;
   * For public sector to create partnerships with private sector

The section below illustrates that, even if the project achieved very concrete results, it is too difficult for this evaluation to be able to verify outcome level results as: it is still too early to assess some of the results identified in the logframe (i.e. student learning outcomes); the M&E and reporting system has some weaknesses that do not allow for measuring those results (see finding 10).

*1. Formal education*

As the ultimate beneficiary of the project, the TOC expected students to effectively learn digital skills/competencies.

Even if it is too early to assess whether the project had a positive impact on learning outcomes, the evaluation considers that the project could have:

* Clarified and documented how universities intended to monitor and measure teachers’ improved digital capacity
* Conducted a quick assessment of students learning outcomes as part of the pilot activity in the 2 universities (activity 2.4)

Indeed, the evaluation has limited evidence about whether the learning outcomes for teachers have improved or not – there is only some anecdotal evidence on this subject[[45]](#footnote-46)

*Quote*

*Now teachers use gained knowledge in their lectures to students (interview with staff from university)*

*Quote*

*Most of the university teachers are using resources. Teachers from other universities write me whether they can use these resources. They are public, of course, they can use them (interview with staff from university)*

With the same token, the evaluation could not appreciate the improvement of learning outcomes emerging from the many webinars and online events as it did not receive all the documentation related to that[[46]](#footnote-47).

*2, 3. entrepreneurship ecosystem and private/public sector partnership*

The TOC expected the project to also strengthen the innovation/ICT ecosystem by developing entrepreneurship opportunities and consolidating the private/public sector partnership.

While it is rather difficult to appreciate the impact of the project on the overall innovation/entrepreneurship ecosystem.[[47]](#footnote-48)

As a results of the series of hackathons and other digital events (such as the InnoKG Innovation campaign), youth were able to develop concrete solutions for complex problems. For instance, ‘Burulay Project’ was developed to address the problems of domestic violence on a digital platform. With the same token, another solution was developed to help people with hearing impairment through a digital platform. The project even allowed some people and youth to earn money and find employment[[48]](#footnote-49).

It is very commendable that the project addressed a major element that could potentially have a positive impact on the innovation ecosystem of the country – developing private-public partnerships. The project indeed engaged with private sector companies, such as OLOLO[[49]](#footnote-50) that have a very solid experience on IT. The reason why this is commendable is because working with private sector would be key to help Kyrgyzstan create a digital ecosystem. To do so more trust should be built between private and public sector).

*Quote*

*We tried to engage with private sector – for instance OLOLO participated in our board meetings. I know that private sectors some critical about us. Perhaps we are slower than they expect, at least we are getting back feedback, and we are improving us (interview with UN staff)*

**Finding 7. The project was rather flexible during implementation and was also able to use the pandemic as an opportunity to strengthen its impact**

According to most people interviewed, the COVID-19 crisis was very detrimental for Kyrgyzstan, as it exacerbated socio-economic problems. It also created problems for the project under review as it had to rethink some of its activities that could not be conducted unless some changes were made.

*Quote*

*Due to the pandemic and political situation we lost 2 years and we needed to revise several aspects of the project (interview with UN staff)*

Nonetheless, the evaluation found that the project was able to adapt rapidly and effectively to COVID-19. Not only did the project adapt some of its activities quickly but it also:

* Developed some activities to tackle related healthcare issues: for instance, a solution, which was developed as part of an innovative campaign supported by the project, tried to improve the patient experience through an ‘e-patient record’. Other solutions were also developed during the pandemic to help women tackle the issue of domestic violence that became a major issue during COVID-19
* Used the pandemic to strengthen its impact: the project team was able to adapt quickly and hold the large majority of events digitally. This allowed the team to scale up its impact so as to reach a much bigger audience, as mentioned above. The evaluation found that the project team worked very effectively for this to happen – for instance, for activity 2.6 the team worked hard to ensure that the teachers who were supposed to be trained but were not very knowledgeable about zoom and digital tools would also receive an appropriate training for them to use those tools.

*Quote*

*Overall, I think the project was very successful taking into consideration the covid which has started early 2020 and the project stuff, project managers and then some assistance as the project team was able to quickly adapt to the new covid situation, also the partners thanks to partners they also were very flexible (Interview with UN staff)*

*Quote*

*While some other projects had lots of problems due to covid and partners meaning they were not very flexible and adaptive to virtual models of working and so that's more overall in terms of programming (Interview with main stakeholder)*

It should also be noted that the 2 universities targeted by the project highlighted how important and timely the support from this project was as they manage to smoothly transition to online tools and could indeed continue to teach and work during the pandemic

*Quote*

*We started using these servers before the pandemics, which helped to solve our online education during lockdown*

*(interview with staff from university)*

## Efficiency

**3. Main questions:** To what extent did the project achieve its objectives with optimized resources?

**Sub questions:**

3.1 Have funds and activities related to project been delivered in a timely and resource appropriate manner?

3.2 To what extent was the governance set-up appropriate to achieve results?

3.3 To what extent were the monitoring mechanisms in place effective in measuring and informing management of the project performance and progress towards the targets?

This section addresses the main questionand sub-questions related to the efficiency criterion. It shows: how efficiency of the project was overall solid despite the COVID-19 (finding 8); that, the governance set up of the project was appropriate and appreciated by the stakeholders (finding 9): and that there was willingness to properly follow the progress of the project and measure its results, yet, this did not translate into an effective monitoring, evaluation and learning system (finding 10).

**Finding 8. Despite the pandemic, the funds were delivered in resource appropriate manner.**

As a result of the COVID-19 epidemic, a large number of the activities of the project had to be postponed. Also, the country suffered from political instability and government frequent turnover during project implementation. In this sense, the project board approved an extension 6-months no cost extension, taking into consideration those aspects.

However, this evaluation found the project managed its resources properly and implemented all its activities while achieving most of its objectives. The project partly amended its results framework and postponed some key activities from 2019 to 2020. Indeed, the project made the following adjustments:

* Changes to some activities and indicators[[50]](#footnote-51);
* Change the project budget for 2020 supporting expenditures by $25,000 for the implementation of the new activity 2.7 “support of the national program “digital Kyrgyzstan” with the reallocation funds from Components 1 ($15,000) and Components 2($10,000

The project reached 100% implementation rate and most line items were close to the planned expenditure.

However, as mentioned above, the project did incur in some delays that could have been better addressed regarding the implementation of activity 2.1 regarding the IThub Osh[[51]](#footnote-52).

**Finding 9. The governance structure set up for the project functioned appropriately**

The evaluation found that the perception of the project governance setup was rather positive. The interviews with the main stakeholders[[52]](#footnote-53) and the analysis of the documentation showed that the project Board provided clear guidance from the beginning of the project. Some stakeholders interviewed highlighted, however, that project board meetings could have been also useful to discuss more in-depth subjects.

*Quote*

*Project Board meetings worked well. However, we could have perhaps used the project board more effectively. We were evaluating risks, sustainability issues ourselves at UNDP but we should have used the project Board to think about these issues. I later understood, that the board meetings are not only for reporting etc, but also for finding solutions (interview with UNDP staff)*

Overall, there was a strong willingness and commitment from the main stakeholders to design and implement this project, which was considered by all the stakeholders a strategic one. The evaluation found, in particular, that UNDP set up a clear division of roles and responsibilities among its staff ensuring that there would be constant project management, oversight and that the project would comply with the organization procedures. This was a contributing factor that helped the project achieved its results.

*Quote*

*We worked as a team to ensure that activities would run smoothly Also, the project manager was quick to identify challenges – I then worked up with him to find quick solutions to those challenges (interview with UNDP staff)*

**Finding 10. There was willingness to properly follow the progress of the project and measure its results - however, this did not translate into an effective monitoring, evaluation and learning system**

The project team developed a M&E results framework and TOC and incorporated them into the project document. The project also complied with all the reporting procedures and duly filled in all the progress reports.

However, the evaluation found the following obstacles[[53]](#footnote-54) for the project to effectively monitor the progress of the project and to learn from it:

* The M&E framework placed strong emphasis on outputs (and activities) rather than on outcomes. Most indicators were primarily at the output level such as “number of students participated at the training programmes’” (indicator 1.2). The framework only included 1 indicator on improving learning outcomes (teachers with increased capacity in improvement in digital skills development - indicator 1.3) - however, there is no information available on how the project actually measured it.

The framework also merged indicators that measure short and long term results that should have been kept separate – for instance, ‘% of youth employed after graduation’ (indicator 2.6) is a longer term result and should not be placed in the same category as others output indicator.

* The project TOC was quite detailed and incorporated as an annex to the project document. However, it did not specify the assumptions for each results level (inputs, outputs, outcomes and impact). Also, the target constituencies identified by the TOC (youth in Osh with a specific focus on underprivileged) is questionable as there was no indicator measuring the impact of the project on youth and, in particular, vulnerable groups.
* Even if the progress report contained much information about the progress, the evaluation found the following weaknesses in the reporting as follows:
  + Progress report did not always include the progress of all the activities
    - For instance, 2021 does not mention activity 1.6 on teacher training.
  + Progress report did not always give information that can give readers an overview of the results of the activities:
    - For instance, 2021 Progress report concerning the activity 2.6[[54]](#footnote-55) only mentioned that ‘TOT activities were completed in December 2020, a report was provided’ - it is therefore difficult to appreciate how the project managed to improve the teacher capacity to adopt new learning methods, also for girls and youth with special needs

This evaluation does not consider those limitations to be major. However, given that the project achieved some important results, it could have provided even more evidence about them if those challenges were to be addressed.

## Sustainability/Impact

**4 Main question:** To what extent the project results are likely to be sustained over time?

**Sub-questions**:

4.1 How effectively has the project generated national ownership and capacity to continue implementation of the results achieved?

4.2 How likely is it that the results of the project will sustain after its end?

This section addresses the main questionand sub-questions related to sustainability. It shows: that there are already encouraging early signs of sustainability (Finding 11); and that, however, there should be a follow-up to support the government on clarifying the roles on digital skill development as well as an analysis of the contextual constraints of the country especially on the overall innovation ecosystem (Finding 12).

**Finding 11. There are already some encouraging signs of sustainability emerging from project activities**

As described in the effectiveness section, the project achieved very concrete results that have already been institutionalized, as follows:

* The draft of the national strategy on digital skills and competencies and roadmap has now been verbally accepted and should, in principle, be formally approved by the MoES and SCITC. With the same token, 3 educational standards have also been developed and approved by the MoES
* The project not only provided IT equipment and infrastructure to 2 universities but also trained teachers and engineers on how to use them so as to ensure sustainability
* Open classes developed by the project are now accessible to participants and teachers and even students can access it. Even Ministry can see information online about students and statistics related to our students.

It is also important to mention that as a result of the project activities, the Work Bank has designed a project (50mln $) to improve skills of all 58,000 school teachers in the country. Based on the content produced by the project, they are therefore delivering trainings to all those school teachers.

**Finding 10: While some results are already sustainable, for others to be sustainable there should be both a follow-up to support the government on clarifying the roles on digital skill development and an analysis of the contextual constraints of the country especially on the overall innovation ecosystem**

The evaluation found that the project has definitely been a positive contributor to creating some basic foundation around digital skill development both on formal and informal education.

However, if the ultimate result is to improve the digital skills mismatch of youth, the project and the other main stakeholders (government other donors) should take into consideration some potential challenges to sustainability.

*Government ownership*

Concerning government ownership, it is important to highlight that it is not clear for the government what is exactly the division of responsibilities between the MoES and the newly established Ministry of Digital Development[[55]](#footnote-56) around digital skill development. This was confirmed by the interviews conducted as part of this evaluation.

While the Ministry of Digital Development (MDD) stated they would like to play an important role in digital skill development[[56]](#footnote-57), other stakeholders mentioned that this should be the role of the MoES that is responsible for policy making of education. According to them, the ministry for digital development should stay mostly focused on physical and digital infrastructure in the country.

Overall, the evaluation found that while the division of responsibilities it is not clear there is good willingness from the MDD to collaborate with the MoES on digital skill development as well as with UNDP and other partners. Indeed, the MDD also emphasized how important it would be for international organizations to provide TA to the ministry on their skills and competencies

*Quote*

*No document was developed to clarify roles in this sphere even if we are already working in development of digital skills. but we are willing to work with the Ministry of Education and with the private sector and International Organizations. We hope UNDP also will be involved in our activities (interview with staff from MDD)*

*Partnership public/private and innovation ecosystem*

The project was rather successful at initiating some activities to further the innovation/entrepreneurship ecosystem. However, as mentioned in the effectiveness section, it is not possible to expect a single project to improve the whole ecosystem and there is, therefore, the need to continue this work.

From the interviews with some stakeholders, it is clear that some considerations will need to be made on the potential constraints that might hamper the development of a solid entrepreneurship ecosystem. For instance, research on entrepreneurship ecosystem in lower-middle-income economies (such as Kyrgyzstan) has shown that there are important constraints to developing more start-ups and small and medium enterprises, as follows:

* Regulatory problems and difficulty for citizens in to start and registering a business (whether the VAT is expensive or not);
* Difficulty for youth to access loans and finance;
* Lack of mentors and people with useful expertise;
* Lack of incubators and accelerators.

# V. Conclusions and recommendations

## Conclusions

The project “Digital skills and opportunities for youth employment towards digital economy in the Kyrgyz Republic’ implemented by UNDP was a project that aim to help the government of Kyrgyzstan to strengthen the enabling environment and eco-system to support youth to take advantage of the opportunities offered by the digital economy. The project used an integrated approach on education (working around formal and informal education) and was able to achieve important results that offer a strong basis for the country to further its digitalization efforts.

The evaluation found that the project was highly relevant as its design was embedded in a solid understanding of the of the challenges related to digital skill development (despite the fact that there is still no rigorous assessment of the digital literacy of the whole population and in particular of the youth in the country). The project presented a solid rational for investing in youth (vulnerable groups), for linking the education and digitization, and showing the nexus between nexus digitalization and employment. As digitalization is becoming a very high priority for Kyrgyzstan as well, the evaluation found that the development of this project is very needed and timely for the country.

Based on this analysis of some of those challenges, the project approach (especially for the first component) was found to be appropriate to address (some of) the problems identified at design stage related to digital skill development. Not only did the project intended to work around formal education but it also appropriately highlighted the importance to work around non formal education as well as will be playing a critical part of digital skills development of youth in the country. The evaluation also found that the project appropriately adopted a gradual and sequential approach to develop its activities especially related to the 1st component.

Despite the difficult circumstances created in particular by the pandemic, there is solid evidence that the project achieved very concrete results for both outputs. Indeed, the supported the government to develop a national strategy on digital skill development, to develop and pilot new educational standards providing also TA to 2 universities in order for them to appropriately apply those standards. It also supported the design and delivery of very many digital events that were attended by thousands of participants in the country – indeed, it took advantage of the situation created by the pandemic to reach out to a greater number of people through digital tools. At the same time, it is very commendable that the project started engaging with the private sector on digital skill development related issues and started also thinking about ways to do that more often in the future.

However, this evaluation reckons that it is premature to appreciate the long-term results of the project (i.e. improvement of learning outcomes of students) – yet the project could have better shown the many positive results it has achieved, had the M&E system been more solid. Also, the evaluation found that the strategy and analysis developed lack to better articulate the specific competencies and skills that youth in the country should develop (‘digital framework for the country’).

The project resources were managed efficiently and the project was able to smoothly transition all activities online when the pandemic struck the country. However, the project faced several challenges and delays for implementing activity 2.1 (Strengthening the IThub in Osh) because of problems outside its control (political turnover and instability) and within its control (procurement problems to validate a private sector company).

While there are already some encouraging signs of sustainability emerging from project activities (some results are already institutionalized), there are several obstacles that may hamper the sustainability of the project results such as the lack of clarity between the Ministry of Education and Digitalization on digital skills development as well as the contextual constraints around the innovation/entrepreneurship ecosystem in the country.

## Recommendations

The recommendations below provide specific suggestions for each intended user of the evaluation. The recommendations are presented in order of priority for each intended user.

**UNDP**

1. ***UNDP should continue supporting the government in its digitalization efforts with a focus on education***

UNDP should use the momentum created and continue investing into development of digital skills and competencies of the young generation at the same time re-defining target age groups and expanding these processes to the whole education system, which would include younger children, adolescents and very young adults, thus covering secondary school, higher and professional vocational education system. The project introduced very promising practices towards development of digital competencies among young people using formal and non-formal channels. These efforts would further require longer-term education reform support with very serious (state) funding.

At the same time UNDP should involve extensively the young people into the process of successor project development starting from design, implementation, monitoring, evaluation and learning.

UNDP should also consider the potential of developing regional project to support digital transformation reform in the country including the neighboring Central Asian countries and the Russian Federation.

1. ***UNDP should support the government develop a stronger baseline on digital development skills and adapt the competency framework***

While the analyses conducted as part of the project are essential to have a better understanding of the digital development skill of the country, it is recommended to go further and assess the digital literacy and skills of the population of Kyrgyzstan. At the same time, it is also essential to build on the digital competency assessment methodologies have been developed in the world (i.e. DigComp 2.1 of the European Union) yet to adapt these methodologies on the basis of the specificities of the country.

1. ***UNDP role should be not just to provide technical assistance to the government around digitalization but also to act as a knowledge broker and connector***

As mentioned above, UNDP should continue supporting the government in its digitalization agenda. However, as demonstrated by this project, UNDP has the potential and is well placed to act as a connector between academia, the government, private sector, and other international organization – as the figure below shows.

**Figure 2. UNDP as a connector**



Indeed, UNDP could facilitate a process of dialogue, learning and knowledge exchange among the stakeholders around digitalization initiatives. The objective would be not only to learn from each other but also to increase trust and further collaborate together.

1. ***UNDP should make learning one of the priorities when developing/implementing projects by strengthening MEL systems***

UNDP should strengthen Monitoring and Evaluation systems and integrate Learning (MEL) as one of its priorities. It is of utmost importance that learning becomes a central part of projects and the agencies incorporate that in project activities, especially in Kyrgyzstan where there are frequent and unexpected changes in the government and when dealing with complex issues such as digital transformation, it is key to learn quickly from the project activities and adapt as a result of that. M&E system should be viewed more broadly and it should include the development of an articulated TOC, with a solid logframe with a clear monitoring table, the definition of responsibilities of partners, a clarification of the information flow and an explanation of how learning would happen throughout the project and how it will inform programmatic decisions on changes.

More specifically regarding M&E frameworks, UNDP should:

* + Develop SMART indicators and develop data collection tools that can actually facilitate the attribution, to the extent possible, to the activities of the project.
  + Develop specific tools or mechanisms to be able to capture learning outcomes. In that sense, it is recommended to use qualitative methodologies such as the ‘outcome mapping’ approach that empowers beneficiaries to collect the data themselves also by showing the changes in the behavior they are observing.

Regarding specifically learning initiatives, Annex 4 provides an overview on how to develop and measure those type of initiatives.

* + Develop a unified database where the information gathered on the indicators rather than having separate ones.
  + Develop a M&E system and workplan that allow for some flexibility on how to revise the indicators, if need be.[[57]](#footnote-58) This implies developing a solid RF/logframe and related workplan but also giving flexibility to the project to easily revise activities, indicators or budget items during implementation.

**Private sector**

1. ***Private sector should make efforts to find synergies with governments and collaborate with them on digitalization related aspects***

In many countries in the world, private sector and government are increasingly working on many digitalization initiatives[[58]](#footnote-59) – private sector (and startups) is well positioned to support the government to solve complex problems through technology. It is recommended that private sector engages more with the government (also through UNDP – finding 4) to show how it could be beneficial for them to work together.

This applies also to digital skills development – for instance, private sector could offer specific opportunities for youth on digitalization (from hiring the youth, but also provide input into the curricula, participate in the set-up of national qualifications framework etc.).

in workplace training at a lower cost, through internship and apprenticeship schemes, participating in consultations to define current skills needs and define future ones etc.

**Government**

1. ***The government should build on the results of the project to ensure sustainability by clarifying the roles and responsibilities concerning digital skill development***

As mentioned in the findings section, it is yet not clear what is the division of responsibilities between the MDD and the MoES on digital skill development. It is extremely important that the government clarifies ‘who does what’ and ensure that the two ministries collaborate with each other

1. ***The government should invest in its entrepreneurship/innovation ecosystem by firstly analyze the current situation***

It is also recommended that the government, in collaboration with donors and private sector:

* Discuss about the factors that make entrepreneurs and start-ups successful worldwide (and conduct a throughout analysis of those factors);
* Identify the main constraints in the context of the country in terms of the “entrepreneurship system”;
* Develop an action plan to address the main constraints based on its specific context.

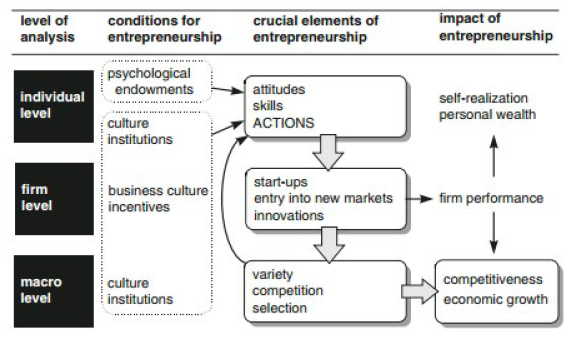
There should be indeed a further analysis and discussion about what are the factors that represent the drivers for entrepreneurship and start-up. For further scale-up and develop the program, it will be important to first reflect upon all the elements that help entrepreneurs succeed.

According to recent researches, the “success” of start-ups is the result of a complex interplay of factors, such as the following:

* Availability of human and social capital and affordable and accessible training;
* Positive sociocultural norms;
* Effective policies and regulations;
* Strong infrastructure and easy access to finance;
* Absence of corruption and the ability to overcome vested interests;
* Strong network;
* A “startup/entrepreneurial ecosystem.”

Those factors could be seen as grouped into 3 level of analysis as the table below shows.

**Figure 3. The individual, firm and macro level related to entrepreneurship**



Source: Carree and Thurik (2010)

In the case of Kyrgyzstan, it will be of utmost importance to better analyze the macro level and, in particular, the constraints that hamper entrepreneurship in the country. In particular, the attention should be on: the regulatory frameworks - whether governmental regulation facilitates or not (ease of entry and exit due to a low administrative burden, have sound contract enforcement mechanisms, effective property rights registration procedures, strong creditors’ rights protections, low tax burden on new and small firms, and more flexible labor markets); on the human capital and on how to develop skilled employees and managers (startups may, in fact, be more dependent on human capital than incumbent firms); on access to finance (whether access to finance is easy especially for youth and what are the informational asymmetries in restricting access to finance for small and young firms); on the existence of social networks (having an extensive social network is an asset that can facilitate an entrepreneur’s access to market); on the overall culture (a culture may or may not encourage entrepreneurial activity through its selection of values is a feature of the entrepreneurial ecosystem).

The analysis should also be based on the specificities of the country. Often, many entrepreneurship programs have replicated what has been achieved in developed countries in developing countries without thinking too much about the constraints contextual to each country. According to recent researches, there is reason to believe that the findings from developed economies are not necessarily transferrable, and, at the very least, they should motivate more in-depth research into the impact, characteristics and drivers of growth entrepreneurship in developing countries.

For the case of Kyrgyzstan, the government should discuss what kind of entrepreneurship it is looking for and what kind of measures could be developed to develop it.

# Annexes

Annex 1. TORs of this evaluation

The project “Digital skills and opportunities for youth employment towards digital economy in the Kyrgyz Republic”, funded by the Russian Federation, was launched in February 2019 for an initial period of 28 months and in May 2021, it was extended for additional 6 months. The current project ends in December 2021.

In general, the project contributes to the UNDAF Outcome 1: By 2022, inclusive and sustainable industrial, agricultural and rural development contribute to economic growth, decent work, improved livelihoods, food security and nutrition, especially among women and vulnerable groups, as well as CPD Results Area 1: Sustainable and Inclusive economic growth with the respective CPD outputs:

· CPD output: 1.1: Policy frameworks and institutional mechanisms enabled at the national and subnational levels for sustainable, resilient, inclusive and gender responsive economic growth.

· CPD Output.1.3: Women, youth and people from the regions with high poverty rate benefit from improved services and infrastructure, better skills, access to resources, sustainable jobs and livelihoods

The project’s objectives are as follows:

1. Objective 1: Enhancing the capacity of formal education system and to apply new educational standards for digital skills and deliver the demand-driven curriculum to better prepare youth for digital economy. This will be achieved by establishing the new digital skills standards and strengthening the institutional capabilities of the formal education system (technical universities and vocational lyceums in Bishkek and Osh) to equip youth with job-ready, transferrable digital skills, including basic, intermedia, advanced digital entrepreneurial and soft skills, as well as enhancing the digital competencies of teachers to better integrate digital skills development in education. Under this component the Project will work with the Government of Kyrgyzstan on the formulation of the National Strategy on Digital Skills.

2. Objective 2: Creating platform for innovative partnerships with private sector in support to initiatives that would accelerate the growth of digital jobs and business in the country. This will be achieved through partnership with private sector in establishing the first ever IT hub in Osh City that will provide the space for youth from Osh, Batken and Jalalabat provinces to gain IT skills and connect them to employment and business development opportunities in digital economy. IT hub will serve a catalyst for boosting the innovations, creating networks of digital start-ups, digital experts, including from the Russian Federation, private sector and financial institutions to ensure access to venturing or other forms of capital.

The purpose of the Project is to contribute to creating environment and ecosystems to enhance ICT employability skills of the youth for new employment and entrepreneurship opportunities, and thus reducing inequalities and fostering inclusive and sustainable economic growth and jobs creation in Kyrgyzstan. The core approach will be to create an enabling environment for youth to seize the employment and entrepreneurship opportunities offered by the growing digital economy. This will apply interventions aimed at the systemic changes in the system of the formal education, as well as boosting successful demonstration of the power of non-formal education to serve as accelerator for gradual changes in the entire ecosystems. The Project will be supporting relevant national policies, institutions and frameworks, upgrading education facilities to provide inclusive and effective learning environments, supporting supply of materials and enhanced teacher qualifications, facilitating best practice exchange and application of innovative instruments, and enabling equal access to education and vocational training for the vulnerable, especially for young women and girls, and persons with disabilities.

Coherent interventions suggested by the Project’s design will be laying the ground to the following core objectives:

1) Enhancing the capacity of formal education system to apply new educational standards for digital skills and deliver the demand-driven curriculum to better prepare youth for digital economy;

2) Creating the space for innovative partnerships with private sector in support to initiatives that would accelerate the growth of digital jobs and digital business in the country;

To achieve these objectives, the Project will popularize and engage the socially and economically innovative ways of boosting digital technologies that may help marginalized young people, especially girls and young women in rural communities to increase their participation in the world economy, and eventually help them gain skills, confidence and opportunities to take more control over their future.

The main partners of the project are the Ministry of Education and Science of the Kyrgyz Republic and the Ministry of Digital Development of the Kyrgyz Republic.

In accordance with the Project Document and UNDP Evaluation Plan, the project has to undertake an independent evaluation by its end. The aim of the evaluation is to assess the progress and results achieved within the project’s lifespan.

OBJECTIVE  
The objective of the evaluation is to assess achieved results under Project, sustainability of benefits and draw lessons

that can contribute to the decision making regarding the further engagement of this issue.

The main purpose of this final evaluation is to assess the programmatic progress, performance of the project interventions from the point of view of relevance, effectiveness, impact, organizational efficiency, sustainability as well as analysis of lessons learnt highlighting areas where the project performed less effectively than anticipated. The findings of the evaluation will contribute to effective programming, refining the approaches, organizational learning and accountability.

Key Evaluation questions and guiding principles.

Final evaluation of Project will be conducted according to the guidance, rules and procedures established by UNDP as reflected in the UNDP Evaluation Guidelines1. The Evaluation will assess the Project according to standard evaluation criteria, as elaborated below, in line with the United Nations Evaluations Group norms and principles.

1 http://web.undp.org/evaluation/guideline/documents/PDF/UNDP\_Evaluation\_Guidelines.pdf

However, the consultant in his methodology may propose new or different questions in close coordination and consultation with UNDP. The evaluation will address the following four main evaluation questions.

1. What did the UNDP Project intend to achieve during the period under review?
2. To what extent has the project achieved its intended objectives?
3. To what extent has UNDP project been able to adapt to the COVID-19 pandemic and support the country’s

response and recovery process?

1. What factors contributed to or hindered Project’s performance to the sustainability of results?

To address above mentioned questions, a project Theory of change (ToC) approach will be used to better understand how project’s interventions are expected to lead the sustainable finance management in CIS countries. Also, question 3 will help us examine UNDP’s support to COVID-19 response at the Country level. In addition to the above questions, the evaluation is expected to produce answers surrounding the evaluation criterial of relevance, effectiveness, efficiency and sustainability and impact, national ownership and lessons learned. Below are guiding questions.

● Relevance  
o WastheProjectrelevantinaddressingkeychallengesofimplementingdigitalskills,identifiedbythe

Project Document?  
o Whetherimportantgapsexist,oropportunitiesarebeingmissed?  
o Did the Project activities and strategies fit the objectives, i.e. is there internal coherence between

what the Project is doing and what it is trying to achieve?  
o To what extent were the Project interventions relevant to the needs and priorities of the target

groups/beneficiaries?  
o DidtheProject’soutcomeisexpectedtoproducethedesiredchange?

● Effectiveness o To what extent did the Project achieve its intended objectives and contribute to the project’s strategic vision?

o AssesstheleveltowhichProjectimplementationwasflexibleandadaptivetothecontext.  
o To what extend did the Project mainstream a gender dimension and support gender responsive

activities?  
o Howhavestakeholdershavebeeninvolvedintheproject’simplementation?

● Efficiency o Assess whether the Project has utilized Project funding as per the agreed work plan to achieve the projected targets.

o AnalyzetheroleoftheProjectboardandhowefficientlydidtheProjectusetheProjectboard.  
o AssessthetimelineandqualityofthereportingfollowedbytheProject.  
o Analyze the performance of the M&E mechanism of the Project and the use of various M&E tools

(any data available to the project etc.).  
o Assessthequalitativeandquantitativeaspectsofmanagementandotherinputs(suchasequipment,

monitoring and review and other technical assistance and budgetary inputs) provided by the project

vis-à-vis achievement of outputs and targets.  
o Identify factors and constraints, which have affected Project implementation including technical,

managerial, organizational, institutional, and socio-economic policy issues in addition to other

external factors unforeseen during the Project design (e.g. Covid-19 factor).  
o Howefficientwastheoverallstaffing,planningandcoordinationwithintheproject(includingwith

stakeholders)?  
o Haveprojectfundsandactivitiesbeendeliveredinatimelymanner?  
o Howwelldidtheprojectcommunicateonitsimplementationandresults?  
o Overall,didtheprojectprovidevalueformoney?Haveresourcesbeenusedefficiently?

● Sustainability and Impact  
o AssesspreliminaryindicationsofthedegreetowhichtheProjectresultsarelikelytobesustainable

beyond the Project’s lifetime (both at the community and government level) and provide

recommendations for strengthening sustainability.  
o Didtheinterventiondesignincludeanappropriatesustainabilityandexitstrategy?  
o HowstrongisthecommitmentoftheGovernmentandotherstakeholderstosustainingtheresults

of Project’s support and continuing initiatives?  
o To what extent have national partners committed to providing continuing support (financial, staff,

aspirational, etc.)?

● National ownership o Assess the degree of involvement of national partners and aligning to existing priorities of the local government in targeted areas.  
o How has the project enhanced and contributed to the development of national capacity?

● Lessons learnt/ Conclusions  
o Ananalysis of the main lessons learnt in relation to the effectiveness of foreseen strategies to achieve the

Project’s objectives  
o Ananalysis of the main lessons learnt in relation to the effectiveness of implementation modalities

The review will cover the full period the project has been operational. And it is expected that the evaluator will develop and consecutively refine an evaluation matrix, which will relate to the above questions, the areas they refer to, the criteria for evaluating them, the indicators and the means for verification as a tool for the evaluation. The final evaluation matrix will be approved in the evaluation inception report.

Also, the project evaluation should cover the Human rights and Gender equality in line with the UNDP’s Gender mainstreaming strategy and Gold Gender equality seal obtained in 2019. Gender disaggregated data will be collected, where available, and assessed against its project outcomes and awarded gender marker.

· To what extent have gender equality and the empowerment of women been addressed in the programme strategic design, implementation and reporting? Are there key achievements?

· In what way could UNDP enhance gender equality and human rights?  
· What barriers have been seen to the inclusion of vulnerable groups in project activities and what can be done

to improve inclusion of these groups?

Evaluation Methodology  
The evaluation will be summative and will employ a participatory approach whereby discussions with and surveys of key stakeholders provide/ verify the substance of the findings. Proposals submitted by prospective consultants should outline a strong mixed method approach to data collection and analysis, clearly noting how various forms of evidence will be employed vis-à-vis each other to triangulate gathered information.

Proposals should be clear on the specific role each of the various methodological approaches plays in helping to address each of the evaluation questions. The methodologies for data collection may include but not necessarily be limited to:

· Data collection method. During this phase, the evaluation consultant will be engaged in data collection activities. Given the current travel limitations due to COVID some of the data collections and interviews will be undertaken virtually. The evaluation consultant will liaise with CO staff and management, key government stakeholders and other partners and beneficiaries during this stage.

· Rigorous desk review of documentation supplied by UNDP team: Project documents, previous evaluations, project reports, key intervention reports and policies, etc. Where possible and relevant more detailed monitoring information will be analyzed, such as community monitoring data and activity reporting.2

· Stakeholder engagement. A participatory and transparent process will be followed to engage with multiple project stakeholders. Key informant interviews as appropriate, with major stakeholders (Interviews will be conducted online). Stakeholders will be selected in close coordination with the Project and will at minimum include: - Government authorities with a key responsibility towards the project.

* -  UNDP COs in Kyrgyzstan.
* -  Implementing partners, such as companies, educational institutes, experts and consultants. -

Project beneficiaries.

* -  Other stakeholders if relevant. ❖ Desk research:

Desk review of relevant documents such as project documents, progress reports, financial records, other relevant documents/reports, and secondary data or studies relating to the country context and situation.

❖ Interviews & focus group discussions with stakeholders (to be conducted online):  
These interviews can take place on an individual basis or in groups, and have to cover all groups of partners, beneficiaries, implementing agencies, partners.

All meetings and conversations will be held only once the appropriate approvals have been obtained, for which UNDP

will take primary responsibility. If approvals cannot be obtained on time, it is possible that some of these stakeholders

may not be interviewed. ❖ Validation

The review findings will be presented to UNDP to collect feedback on these main findings and serve as a validation exercise.

Products expected from the evaluation:  
1) Inception report with finalized and agreed terms of reference, evaluation matrix, questionnaires and

agreedmethodology of evaluation.  
2) A comprehensive evaluation report with findings, recommendations, lessons learned.

The draft Report and Final Reports: The Report should be logically structured, contain evidence-based findings, conclusions, lessons learnt and recommendations, and should be free of information that is not relevant to the overall analysis. The Report should respond in detail to the key focus areas described above.

Presentation: For presenting and discussing the draft final report interactively, UNDP will facilitate a concluding workshop for the Project stakeholders

The evaluation will be independent. The evaluation will be a consultative, inclusive and participatory process. The evaluation will be managed by the Project coordinator, UNDP M&E officer and Team Leader of UNDP SEG program leader to oversee evaluation management and quality assure throughout the evaluation process.

UNDP will help facilitate contacts and set up meetings, and overall support the evaluation.

Time Schedule

The timeframe and responsibilities for the evaluation process are tentatively as follows: Tentative time schedule Period (all tbc)

Inception report with agreed evaluation methodology, 2 days questionnaires, and action plan

2 This data will only be included in the desk research when it is in a format that is accessible and relatively easily digestible for the reviewer.

Initial desk research

Interviews and\or group discussions

Preliminary analysis and the provision of the first draft report

Validation and the inception meeting with UNDP

Submission of final report (with minimum two rounds of comments)

2 days 5 days 4 days 1 days 4 days

2 day

Payment structure 50%

Final discussion of the project with UNDP

Deliverables

1. 1  Provided Deliverable 1 (The first approved

draft report)

1. 2  Provided Deliverable 2 (The final approved report)

Evaluation ethics.

DELIVERABLES Due date

End of October, 2021

November 50% 20th, 2021

This evaluation will be conducted in accordance with the principles outlined in the UNEG ‘Ethical Guidelines for Evaluation’ which are available here: http://www.unevaluation.org/document/detail/102. The consultants must safeguard the rights and confidentiality of information providers, interviewees and stakeholders through measures to ensure compliance with legal and other relevant codes governing collection of data and reporting on data. The consultants must also ensure security of collected information before and after the evaluation and protocols to ensure anonymity and confidentiality of sources of information where that is expected. The information knowledge and data gathered in the evaluation process must also be solely used for the evaluation and not for other uses without the express authorization of UNDP and partners.

REPORTING REQUIREMENTS

Accountability and reporting:

Under the leadership and guidance of UNDP M&E officer and Team Leader of Outcome 1 and under the direct supervision of the TL of the Outcome 1, the Consultant will fulfill the task within this ToR. The UNDP M&E Officer will provide overall strategic oversight and guidance for the entire process, and the coordination support will be assured by the CO respective team (Outcome 1 cluster). The Consultant will be certified against each deliverable by the SEG Team Leader, which will serve as a justification for payments.

All reports should be provided in English language, with the detailed description of the fulfilled tasks, according to the present Terms of Reference, and the direct contribution of the expert. Analytical documents, reports and notes developed by experts should be attached to the reports as annexes, which will serve as a justification for payment.

QUALIFICATION REQUIREMENTS

* -  Minimum Master’s degree in social science, or other areas, relevant to the subject of the assignment.
* -  At least of 5 years of professional experience in the field of education / digital economy / ICT/ in conducting

evaluations / / digital economy related strategies and/or policies in programs and\or projects

* -  Strong knowledge of UNDP and its working approaches including partnership approaches with Government,

civil society and community groups

* -  Fluency in English language

TRAVEL Travels are not foreseen. All tasks are implemented online.

ADDITIONAL REQUIREMENTS FOR THE RECOMMENDED CONTRACTOR Statement of Medical Fitness for Work.

For an Individual Contractor who is of 65 years of age or older, and on an assignment requiring travel, be it for the purpose of arriving at the duty station or as an integral duty required under the TOR, a full medical examination and statement of fitness to work must be provided. However, this is not a requirement for individuals on RLA contracts

Where there is no UN office nor a UN Medical Doctor present in the location of the Individual Contractor prior to commencing the travel, either for repatriation or duty travel, the Individual Contractor may choose his/her own preferred physician to obtain the required medical clearance.

Inoculations/Vaccinations

Individual Consultants/Contractors are required to have vaccinations/inoculations when travelling to certain countries, as designated by the UN Medical Director. The cost of required vaccinations/inoculations, when foreseeable, must be included in the financial proposal. Any unforeseeable vaccination/inoculation cost will be reimbursed by UNDP.

Security Clearance.  
The Consultant should undertake the BESAFE training. These requirements apply for all Consultants, attracted

individually or through the Employer.

SCOPE OF PRICE PROPOSAL AND SCHEDULE OF PAYMENTS Contracts based on lump-sum

The financial proposal shall specify a total lump sum and payment terms around specific and measurable (qualitative and quantitative) deliverables. Payments are based upon output, i.e. upon delivery of the services specified in the TOR. In order to assist the requesting unit in the comparison of financial proposals, the financial proposal will include a breakdown of this lump sum amount (including travel, per diems, and number of anticipated working days)..

Preferred Currency of Offer: United State Dollars (USD)

UNDP CONTRIBUTION

1. 1)  Arranging meetings\interviews with counterparts and beneficiaries.
2. 2)  Project related documents such as Project Document, Annual Work Plans and/or Progress Reports.

Annex 2: Evaluation matrix

|  |  |  |  |
| --- | --- | --- | --- |
| **Evaluation Questions/ Sub-questions** | **Judgment criteria** | **Data collection methods & sources** | **Data analysis** |
| **Relevance:**  **To what extent were the project results relevant to the needs and priorities of the beneficiaries, as well as the national and donor priorities in Kyrgyzstan?** | | | |
| 1.1 To what extent was the design of the project appropriate for achieving the desired objectives? | * Project design (and TOC) is based on a solid analysis – it addresses clearly some of the key challenges of digital skills development * Project is developed on a sound TOC – the hierarchy of results are clear and the related assumptions are based on evidence * Project document builds on the literature on digital skills development - occurrences of mentions to literature on digital skills development * Coherence between outputs and activities is solid | * Desk review of documents * Review of Theory of change * Review of digitalisation literature | * Contribution analysis - analysis of TOC: conflict analysis and analysis of the approach      * Qualitative and content analysis * Comparison between project TOC and good practices |
| 1.2 To what extent was the project based on a sound understanding of the different needs of young women and men? | * % of young women and men perceive the project as relevant for their needs (including vulnerable groups) * The project team conducted participatory workshops to develop the project - number of youth that have been consulted on or associated with the drafting and design of the project (including vulnerable groups) * Adjustments that the project has made as a consequence of the COVID-19 situation are clearly justified so that it remains relevant to the new beneficiaries’ priorities | * Interviews * FGDs * Review of the project documents | * Qualitative and content analysis |
| 1.3 To what extent is the project consistent with key national strategies, including in the area of digital transformation? | * Project objectives are aligned with relevant institutions policy objectives and with UN strategic document for Kyrgyzstan | * Review of the project * Review of UN documents * Review of government main strategic document * Interviews | Qualitative and content analysis |
| **Effectiveness:**  **2.To what extent did the Project achieve its intended objectives and contribute to the project’s strategic vision?** | | | |
| * 1. To what extent have the project’s results been achieved in terms of:      + Enhancing the capacity of formal education to better prepare youth for digital economy;      + Creating partnerships with private sector ;      + Creating spaces and opportunities for youth to be more innovative and entrepreneurial? | * Evidence shows that objectives are met at output and outcome level through:   + Number of concrete deliverables to strengthen the formal education system   + Number of participants in the activities of the project (i.e. teachers, youth)   + Perception of the beneficiaries and stakeholders reporting that the project has been effective   + Increased capacity of beneficiaries in digital skills (i.e. teachers)   + Examples of empowering women (also from vulnerable groups) as they better understand benefits of digital technologies and are motivated to use them   + Causal linkages in the reconstructed TOC are verified by project results   + Number of instances where TOC was used to verify causal linkages and assumptions during the implementation of the project | * Review of the project document * Review of the progress report * Interviews | · Contribution analysis - analysis of TOC: analysis of changes produced by the project and the ones attributable to the project as conditions are met   * Analysis of results data against project logframe (quantitative analysis) * Contribution analysis - Verification of the validity of the TOC main linkages against project results * Analysis of survey questionnaire against interviews and FGD (quantitative analysis) * Qualitative analysis |
| * 1. To what extent the project was flexible and adaptive to the context especially given COVID-19? | * Clarity of mentions for changes to the timeframe, content of the project activities or reallocation of funds also related to the consequences of COVID-19 | * Review of the project document * Review of the progress report * Interviews | * Qualitative analysis |
| **Efficiency:**   1. **To what extent did the project achieve its objectives with optimized resources ?** | | | |
| 3.1 Have funds and activities related to project been delivered in a timely and resource appropriate manner? | * % activities that have been planned and completed on time * % of budget that has been disbursed VS timeline   Number of stakeholders interviewed who perceive the financial and human resources to be adequate for achieving the results of the project in the given timeframe | * Review of project workplan, reports * Interviews * Budget assessment | * TOC-based contribution analysis: analysis of mobilisation and optimisation of assets * Quantitative analysis of the information * Qualitative analysis |
| 3.2 To what extent was the governance set-up appropriate to achieve results? | * Stakeholders interviewed who perceive Project board to have provided clear guidance | * Minutes of Project Board * Interviews with Agencies | * Content analysis * Qualitative assessment of the interviews |
| 3.3 To what extent were the monitoring mechanisms in place effective in measuring and informing management of the project performance and progress towards the targets? | * Project indicators coincide with the TOC of the project * Number of examples of reaction and adaptation of action according to monitoring findings   Evidence of use of SMART indicators in the logframe and project reports - data collection/reporting is based on SMART indicators | * Review of project document, MEL, and progress reports * Interviews | · Content analysis  · Qualitative assessment of the interviews |
| **Sustainability and Impact:**   1. **To what extent the project results are likely to be sustained over time?** | | | |
| 5.1 How effectively has the project generated national ownership and capacity to continue implementation of the results achieved? | * Instances of plans and strategies developed by the government that integrate digital skills development * National counterparts report they are willing and capable to continue the implementation of the project activities | * Review of project documentation * Interviews | * ToC-based contribution analysis: assessing the likelihood of impact of the intended changes and assumptions * Content analysis * Qualitative assessment of the interviews |
| 5.2 How likely is it that the results of the project will sustain after its end? | * Capacity and willingness of teachers to apply new educational standards * Capacity and willingness of private sector to work with public sector * Ecosystem in the country is appropriate for entrepreneurship and for developing startups * Evidence and examples of interventions that are being implemented/have been implemented without support from project | * Review of project documentation * FGDs * Interviews | * Content analysis * Qualitative assessment of the interviews |

Annex 3: Evaluation questionnaire for interviews

**Introductory notes**

* The following guiding questions are intended mainly to be used for semi-structured interviews with stakeholders and beneficiaries
* The questions provided below are meant to serve as a menu. Only relevant questions will be used in each interview, depending on the experience, involvement of the interviewee in each of the initiatives selected as well as the quality of the discussion with the interviewees.

**Steps**

1. Introduction of evaluators and interviewee
2. Introduction of the interview purpose by highlighting that this is not an assessment of the performance or behaviour of anyone
3. Obtain the consent of the interviewee as the interview notes will not be shared and the evaluation will ensure confidentiality/anonymity
4. Question and answer - interviewer takes notes and writes down also the day of the meeting the interviewee name/s

**Guiding Questions**

***For international organizations – UN and other agencies***

* Tell me about your role and involvement in the project?
* What do you think have been some of the key successes and challenges in terms of the design, implementation and results of the project?
* To what extent were the activities in which you were involved relevant for the beneficiaries of the project? To what extent did you participate in the design of the project? Was a gender analysis conducted and integrated into the project design?
* To what extent were the activities you were involved taking into consideration other similar initiatives in the country (*add if needed* - how did you create synergies with other initiatives during implementation)?
* (*If not answered previously*) To your appraisal, what have been the most important results of the project (the activities you were involved in and, more generically, the results of the project) for building capacity of young men and young women in IT (can you give me examples of that – i.e. specific skills youth acquired)? Curriculum development? Formulation of the National Digital Skills Development Strategy? ITHub in Osh?
* What were the key factors contributing or not to achieving the results? Do you reckon you had sufficient financial and human resources for achieving the results of the project in the given timeframe? To your appraisal, was the project approach innovative and if so, how (how would you define innovation)?
* Did COVID-19 influence the implementation of the project and what did the project do to address possible negative consequences?
* What are the measures being developed to institutionalize/formalize the results of the project – has the national counterpart enough ‘capacity’ to continue implementation? Are there any examples of spill-over effects or replication of project activities in other geographical areas or sector?
* How was the cooperation with the other Agencies (privae sector partners, donor) at project design and implementation stage? What were the challenges, if any? Do you think the project was designed on the basis of specific competence and mandate of each partner?
* To your appraisal, how solid was the guidance from the Project Board, and the cooperation among supporting and implementing partners?
* Did you ensure that issues of equity, gender and human rights were integrated into the design, planning and implementation of the activities of the project? How? With what results?
* Other issues?

***For implementing partners/NGOs – Ololo and other private partners***

* Tell me about your role and involvement in the project?
* What do you think have been some of the key successes and challenges in terms of the design, implementation and results of the program?
* What is your appraisal of the problem analysis conducted by the project? To what extent were the activities in which you were involved relevant for the beneficiaries of the project? To what extent did you participate in the design of the project? Was a gender analysis conducted and integrated into the project design?
* To what extent were the activities you were involved built upon successful previous projects in the country (*add if needed* - how did you create synergies with other initiatives during implementation)?
* (*If not answered previously*) To your appraisal, what have been the most important results of the project (the activities you were involved in and, more generically, the results of the project) for building capacity of youth in IT (can you give me examples of that)?
* What were the key factors contributing or not to achieving the results? Do you reckon the project had sufficient financial and human resources for achieving the results of the project in the given timeframe? To your appraisal, was the project approach innovative and if so, how?
* Did COVID-19 influence the implementation of the project and what did the project do to address possible negative consequences?
* What are the measures being developed to institutionalize/formalize the results of the project– has the national counterpart enough ‘capacity’ to continue implementation? Are there any examples of spill-over effects or replication of project activities in other geographical areas or sector?
* How was the cooperation with the UN agency you were working with? What were the challenges, if any?
* Do you think issues of equity, gender and human rights were integrated into the design, planning and implementation of the activities of the project? How? With what results?
* Other issues?

***For institutions (universities, colleges)***

* Tell me about your role and involvement in the project?
* What do you think have been some of the key successes and challenges in terms of the design, implementation and results of the program?
* To your appraisal, what are the main objectives of the project?
* Was the initiative relevant to your needs? Why?
* To your appraisal, what have been the results of the project in terms of enhancing the capacity of formal education system in relation to digital skills development?
* What have been the main results of the project in your institution?
* What were the key factors contributing or not to achieving the results? To your appraisal, was the project approach innovative and if so, how?
* To your appraisal, how is this program developing a system that can be sustainable over time? Are you institutionalizing something part of the program? Why? How?
* What are the possible recommendations to enhance the demand driven curriculum to prepare better the youth for digital economy? Other recommendations.

***For final beneficiaries (youth)***

* Which activity did you participate in[[59]](#footnote-60)? What do you think was the main objective of the activity you participated in (i.e. workshop, training, class with a revised curriculum)? Do you feel there are differences from similar activities you did before this project (i.e. comparing the revised curriculum to the previous one).
* In what ways was this relevant to your needs? Why?
* What did you enjoy the most or did not enjoy about your participation in this activity?
* What are the things that you learned from it (*add if needed* - did you learn new skills? Do you feel more confident? have you been able to apply what you have learned? Did you have any obstacles to do that?
* Do young women in your school/college present? In what way is it different (or not different) for a girls to study IT? Can you give an example? Do you think there are differences for young women or men concerning education in IT – i.e. do young women face more obstacles?
* Do you feel more confident (IT skills) as a result of this activity?
* Thinking about the future, what activities do you think are needed to support you to be better prepared for digital economy?
* Other issues?

Annex 4 - How learning initiatives should be developed and measured step-by-step

Training success is predicated on an adequate design process. Research confirms that good training design process is found to involve three characteristics:

• Targeting of training content, anchored in diagnosis of institutional and/or organizational capacity gaps, formal assessment of participant training needs, and strategic participant selection (diagnosis)

• Use of appropriate and professional pedagogic design, including opportunities to practice learned skills (design and delivery)

• Provision of follow-up sport to trainees to help them implement knowledge and skills acquired (follow-up)

**1. Training diagnostics**

Research has demonstrated that targeting of training content has been found to be the most important design factor driving training success. For training to be well-targeted, organizational and institutional capacity gaps need to be correctly diagnosed, specific training needs must be assessed, and participants should be selected in a strategic manner. Correct diagnosis of training needs should both identify organizational and/or institutional capacity gaps to be targeted and the best means of addressing these gaps. The human, resource, and incentive dimensions of capacity should be considered in order to determine whether training is needed, and what other forms of capacity support are needed, in order to facilitate the implementation of training. The target organization should play an active role in diagnostic exercises, both to better identify capacity problems and to ensure client commitment to training goals.

3 processes are used to target training:

* Diagnosis of capacity gaps involves assessment of existing organizational, institutional, and human capacity gaps and of the appropriateness of training as a means to address these gaps.
* Training-needs assessment roots training design in an understanding of the present capacities of the individuals to be trained and the specific knowledge and skills that participants must acquire in order to meet development objectives.
* Strategic participant selection is necessary to ensure that the participants trained are those whose capacities must be built up in order to meet development objectives.

*Diagnostics of capacity gaps*

Diagnosis involves identification of human, institutional, and organizational capacity gaps that must be addressed in order to achieve development objectives. Diagnostic exercises should also consider what means are most appropriate for addressing these gaps: some human capacity gaps are better addressed through on-the-job technical assistance or the provision of independent learning materials. Moreover, diagnosis must also determine whether there are critical contextual conditions, such as resource or incentive constraints, that are likely to block successful implementation of the application of the knowledge.

3.1: Project-Based Training Provided Adequate Follow-up Support More

As a good example, at Motorola University, new course topics are initiated by the company’s production managers, on the basis of production problems in their units. Instructional designers are then commissioned to determine whether weak performance is attributable to knowledge or skills gaps—which are best addressed through training—or to other constraints, such as incentives, resources, or production processes.

**When Not to Train**

Source: author

Training is not always the best way to address human capacity gaps. Other types of capacity-building interventions may be more appropriate when:

• Solving a problem requires applying a technique rather than building knowledge or skills,

• The number of persons requiring knowledge and skills is limited,

• Tasks are easy to learn,

• Learners have a strong background in the topic and new knowledge and skills can be self-acquired, and

• Learners are not used to or comfortable in classroom environments.

Once diagnosis has determined the capacity needs to be addressed by training, a training needs assessment provides specific information on what participants need to learn, the issues they face, and what is expected from the training.

*Training needs assessment*

Training-needs assessment is used to determine what specific knowledge or skills must be learned to achieve capacity goals. A training needs assessment can be done as part of a diagnostic exercise or separately from it. As a good example, for InWEnt’s multiyear training projects in the field of education, one education expert is contracted to diagnose what capacity gaps the program should address (for example, improving math instruction) and a second expert in the specific target field, is subsequently contracted to do a training-needs assessment and to design a learning program. To do this, a good starting point is a stakeholder analysis, which helps identify the best sources of information regarding training needs. Informants can report on whom they would like to see trained, what type of training is needed, or even who could potentially be a trainer. Involving many stakeholders allows the information to be triangulated and avoids bias caused by too much focus on any one type of respondent.

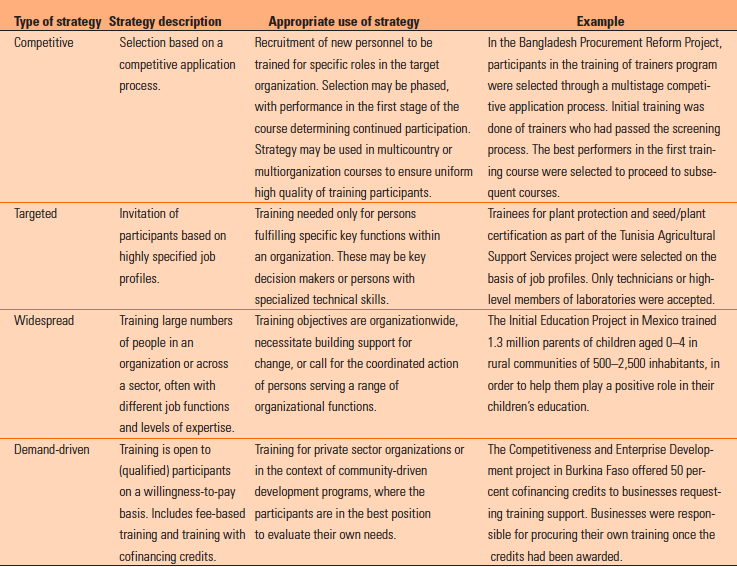
The training-needs assessment usually provides the necessary information for selecting participants or identifying the target group

*Participant selection*

For training to contribute to development objectives, it has to involve the right people, and the right combination of people, in any given classroom. Optimal participant selection strategies vary depending on the development objectives. For certain types of training, it is essential for all trainees to have similar levels of experience and expertise in order to facilitate learning, whereas for others, it may be useful to train an entire unit together, placing high-level managers and low-level assistants in the same classroom. There are circumstances where assembling training participants with a broad range of experience is desirable. However, in many researches done on participant selection it has been found that having equal levels of experience and knowledge was an important contributor to perceptions of successful training. This finding suggests that where participants of similar backgrounds were preferable, this condition was insufficiently ensured.

Participant selection, including the number of people to be trained, as well as how diverse they are, must be linked with course objectives and the context in which change is taking place. The box below shows some of the ways to select participants for training programs

**Type of participant selection for training programs**



Source: World Bank Using Training to Build Capacity for Development An Evaluation of the World Bank’s Project-Based and WBI Training

The levels and backgrounds of the participants help determine the appropriate depth and level of detail of the training. Furthermore, task and job analyses help prioritize learning needs, in order to assign proper time allocation during training delivery. This aggregated information should, in turn, influence the method in which knowledge and skills will be imparted: face-to-face communication, interactive exercises, lectures, etc.

**2. Design-delivery of training**

Good pedagogy involves the matching of curriculum and learning methods to training goals and participant characteristics. Good training design seeks to achieve learning and to support the trainee in applying new knowledge and skills in the workplace. The two training-design practices most commonly associated in the literature with supporting transfer of learning to the workplace are: a) The use of practical learning techniques such as exercises, action plans, and projects where the trainee has the opportunity to explore how learned knowledge and skills relate to or could be implemented in his or her workplace environment; and b) the follow-up support through on-the-job technical assistance or access to off-site expert coaching or advice.

There is no best strategy on how to design and deliver a training, as this depend on several considerations, many of which will depend on the first training diagnosis.

The following six principles provide useful guidelines for successful adult learning.

• Participation: People learn better and remember more when they are actively engaged in the learning process. Practical exercises, discussions, simulations, and games also prompt participants to share their knowledge and experiences, thus fostering a collaborative environment.

• Understanding: Checking participants’ understanding by asking questions, listening to their discussions, or using a vocabulary appropriate to their level (as determined by the training needs assessment) can all improve the learning process.

• Feedback: Providing opportunities to practice and giving trainees specific feedback information on the quality of their work gives participants a sense of their progress toward the learning objectives.

• Interest: The relevance of the training objectives to the needs of the participants is crucial in developing the participants’ interest and ownership of the training. Providing various case studies and activities will help stimulate and maintain interest.

• Emphasis: Focusing the attention of participants on the most important points of the training, by spending more time on important topics and allowing sufficient time to practice new skills, will help them remember the key lessons from the training.

• Results: Keeping participants informed of their progress, and recognizing them for work well done will increase their confidence in newly acquired skills and knowledge, and encourage them to use what they have learned.

Also, there should be a focus on how to use IT effectively and use moredistance and remote learning. In this sense, classrooms could be held online. Teachers are invaluable for learning languages - but they don't need to be physically in the same room.

**3. Follow up**

Follow-up activities assist in the transfer of training to the workplace, by helping to address any barriers to the working environment, and by maintaining participants’ motivation to apply new learning. Follow-up, through technical assistance or supervision, can help trainees adapt the learning to real-life situations. Furthermore, follow-up can contribute to self efficacy (confidence in one’s ability to perform successfully) and motivation, two factors shown to impact skill maintenance

Follow-up support for trainees is in fact recognized in the literature as a second important method for assisting trainees in applying learning. Research has indicated that learning, particularly of skills, is far less likely to be retained and implemented if it is not reinforced by follow-up support once trainees return to the workplace. Where follow-up support is not given, short-term learning gains often do not translate into sustainable behavioral change, due to participant uncertainty about how to apply the learning or lack of positive reinforcement in the workplace for learning application. As one training expert[[60]](#footnote-61) notes, “training should not be seen as an end, but as a means to achieving the organizational objective. The changing of behavioral patterns is a long-term undertaking which, to be successful, needs to be continually monitored and reinforced . . . It is necessary to look beyond training by establishing a coaching and mentoring period to follow the training.”

As a good example, Motorola provides coaches to help employees adapt and implement the training to the job, and sets up a Web page to facilitate dialogue among course alumni.

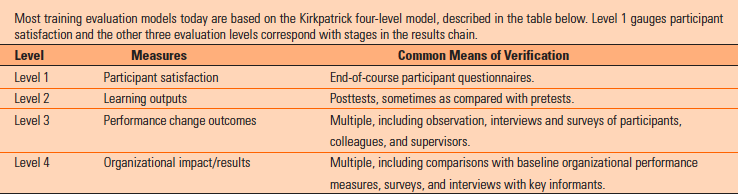
Follow-up can be assured by colleagues and management within the selected organization – the organization delivering the training does not have to always follow-up itself. Research has in fact shown that the support of managers and colleagues in the implementation of learning as the single most important determinant of training success, with availability of material resources and targeting of training emerging as other important variables. As the United Nations Development Programme argued in a 2006 capacity-development practice note: “Attempts to address capacity issues at any one level, without taking into account the others, are likely to result in developments that are skewed, inefficient, and, in the end, unsustainable.” Specific incentives for application of new knowledge and skills include the support and encouragement of managers and colleagues and the existence of legal/regulatory frameworks for implementation of learning. Also, training should not be seen as an end, but as a means to achieving the organizational objective. The changing of behavioral patterns is a long-term undertaking which, to be successful, needs to be continually monitored and reinforced. It is necessary to look beyond training by establishing a coaching and mentoring period to follow the training.

**4. Traning evaluation**

For training programs to be effectively developed and implemented, an appropriate M&E system must be developed.

The box below shows the 4 level of evaluation training that should be considered when developing such an M&E system.

**4 levels of evaluation training**



Source:

The table below is a checklist summarizing the to-do list for developing a training program

**Checklist diagnosis**

|  |  |  |
| --- | --- | --- |
| **1. Training capacity diagnosis** | Do you need a training? Have you conducted a Capacity diagnosis has been conducted? Has Human capacity building correctly identified as necessary for achievement of development objectives | *􀂄* |
| Have you conducted a training-needs assessments? | *􀂄* |
| Strategic participant selection | *􀂄* |
| **2. Design** | Have you developed Clear and specific learning goals? | *􀂄* |
| Have you developed Training curriculum based on organizational needs ? | *􀂄* |
| Have you considered To what extent are participatory methods or practical exercises necessary in order to achieve sustainable learning? | *􀂄* |
| Have you considered the appropriateness of the length How much time should be devoted to specific topics? Have you considered that the length of training program in benchmarking institutions may be 20 to 2 month long? | *􀂄* |
| Learning program based on correct assessment of the present capacities of participants | *􀂄* |
| **3. Delivery** | Have you made sure the curriculum and didactic methods appropriate for learning goals? | *􀂄* |
| Have you made a decision on whether training content be delivered all at one time or spread out over weeks or months? | *􀂄* |
| Are Practical exercises and action learning techniques being done? | *􀂄* |
| Have you thought about whether small class sizes necessary to facilitate learning? | *􀂄* |
| Have you thought about whether course content be covered using electronic or distance learning, or is face-to-face, classroom-based training necessary? | *􀂄* |
| Are competent trainers being used? | *􀂄* |
| **4. Follow-up** | How do you make sure participants apply what they have learned? | *􀂄* |
| Have you created a follow-up system whereby you would follow up on participants? | *􀂄* |
| **5. M&E** | Have you developed a M&E system for the 4 level of training evaluation information? | *􀂄* |

Source: author

Annex 5: Workplan



1. For the rest of us, digital transformation refers to the adoption of digital technology to transform services or businesses. This is achieved by replacing manual (non-digital) processes with digital ones or replacing outdated digital technology with upgraded digital technology. [↑](#footnote-ref-2)
2. A roadmap toward a common framework for measuring the Digital Economy, OECD, 2020 [↑](#footnote-ref-3)
3. New Markets and New Jobs in the Digital Economy, OECD, 2016 <https://www.oecd.org/digital/ministerial/meeting/New-Markets-and-New-Jobs-discussion-paper.pdf> [↑](#footnote-ref-4)
4. Translated from Kyrgyz as *pure society* [↑](#footnote-ref-5)
5. http://www.ict.gov.kg/index.php?r=site/tazakoom&cid=21 [↑](#footnote-ref-6)
6. The Eurasian Economic Union (EAEU) is an international organization for regional economic integration. It provides for free movement of goods, services, capital and labour, pursues coordinated, harmonized and single policy in the sectors determined by the Treaty and international agreements within the Union. The Member-States of the EAEU are the Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, the Kyrgyz Republic and the Russian Federation. The Union is being created to comprehensively upgrade, raise the competitiveness of and cooperation between the national economies, and to promote stable development in order to raise the living standards of the nations of the Member-States. All five members of the EAEU accepted the ‘Digital Agenda 2025’, a medium-term strategic document defining the goals, principles, tasks, directions and mechanisms of cooperation of the EAEU member states on the implementation of the EAEU digital agenda <http://www.eaeunion.org/?lang=en#about> [↑](#footnote-ref-7)
7. http://www.ict.gov.kg/index.php?r=site/tazakoom&cid=21 [↑](#footnote-ref-8)
8. The resident population of the Kyrgyz Republic at the beginning of 2021 amounted to 6 million 637 thousand people, <http://www.stat.kg/en/publications/demograficheskij-ezhegodnik-kyrgyzskoj-respubliki/> [↑](#footnote-ref-9)
9. Demographic Yearbook of the Kyrgyz Republic EMOGRAPHIC YEARBOOK KYRGYZ REPUBLIC [↑](#footnote-ref-10)
10. Data (11.06.2021) National Statistical Committee of the Kyrgyz Republic. Retrieved from http://stat.kg/ru/news/v-2020-godu-kazhdyj-chetvertyj-zhitel-kyrgyzstana-prozhival-v-usloviyah-bednosti/ [↑](#footnote-ref-11)
11. Kudryavtseva, T. (2021). [www.24.kg](http://www.24.kg) [↑](#footnote-ref-12)
12. World Bank predicts further growth of poverty in Kyrgyzstan. (2021) https://rus.azattyk.org/ [↑](#footnote-ref-13)
13. <http://ict.gov.kg/index.php?r=site%2Fsanarip&cid=27> [↑](#footnote-ref-14)
14. Supporting Firm Creation and Growth through Business Development Services in Kyrgyzstan, OECD 2020 [↑](#footnote-ref-15)
15. UNDP project document [↑](#footnote-ref-16)
16. The evaluation will use a non-experimental evaluation design and a theory-based approach. ‘Today, the most commonly used method in development evaluation is a *mixed method results‐based approach*, using both qualitative and quantitative information. ‘ OECD guidance note on evaluating peacebuilding’ [↑](#footnote-ref-17)
17. For a list of the OECD DAC criteria see: [www.oecd.org/dac/evaluationnetwork](http://www.oecd.org/dac/evaluationnetwork) [↑](#footnote-ref-18)
18. The TORs of this evaluation purpose to merge the criterion of sustainability and the one on impact [↑](#footnote-ref-19)
19. The criterion of ‘national ownership’ identified in the TORs has therefore been integrated into the criterion of sustainability [↑](#footnote-ref-20)
20. The questions for those themes are already integrated into the evaluation matrix [↑](#footnote-ref-21)
21. The evaluation team had made a few changes to the questions in the TORs with the aim of reducing the number of questions and regrouping some of them [↑](#footnote-ref-22)
22. Indeed, one analysis conducted as part of the project states that ‘only private universities in Kyrgyzstan provide courses on advance digital skills and disruptive technologies for students and professionals. So, courses on machine learning, artificial intelligence, and data science are offered by "Manas" Kyrgyz-Turkish University, AUCA, UCA. However, such courses are absent in the regional state educational institutions of the republic, where the majority of young people study. Artificial Intelligence Laboratory was established at the International University of Kyrgyzstan. However, a review shows the limited application of these technologies in various sectors of the economy [↑](#footnote-ref-23)
23. Only about is about 1.1% of all employed in Kyrgyzstan is employed in the IT sector, while in Russia this indicator is at the level of 2.44%, and in other countries is 4.3% 5 [↑](#footnote-ref-24)
24. A report produced by the project concludes All this shows a shortage of personnel with relevant competencies and growing demand for new digital skills. [↑](#footnote-ref-25)
25. By Aziz Soltobaev, Project Expert, 2019 [↑](#footnote-ref-26)
26. By Generalov A. I., International consultant, Bishkek 2021 [↑](#footnote-ref-27)
27. By Almaz Beishenaliev, local expert (Minister of Education and Science October 2020 – May 2021) [↑](#footnote-ref-28)
28. By Gulnara Djunushalieva, international consultant, 2020 [↑](#footnote-ref-29)
29. Project Progress Report 2020 [↑](#footnote-ref-30)
30. ‘When planning similar projects in the future, it is recommended to conduct in-depth studies with closer and regular consultations with national partners from government and business both at the central and local levels. Market research should be conducted at the initial stage of the project to obtain important baseline indicators. It is important to choose the main national partner who is extremely interested in the final results of the project and has strong partnerships with other actors in the development process, especially from the private sector’. [↑](#footnote-ref-31)
31. “Digital skills and entrepreneurship in Kyrgyzstan” (Aziz Soltobaev) [↑](#footnote-ref-32)
32. Importance of informal education was also appropriately recognized in the project document ‘*non formal education will be playing a critical part of digital skills strategy because it creates opportunities for learners of any age and geographical location to acquire new skills and can be leverage though public libraires, community centers NGOs* and tech clubs’. [↑](#footnote-ref-33)
33. This includes the development of TORs for teachers from secondary schools [↑](#footnote-ref-34)
34. Outcome 1: By 2022, inclusive and sustainable industrial, agricultural and rural development contribute to economic growth, decent work, improved livelihoods, food security and nutrition, especially among women and vulnerable groups, as well as CPD Results Area 1: Sustainable and Inclusive economic growth with the respective CPD outputs: CPD output: 1.1: Policy frameworks and institutional mechanisms enabled at the national and subnational levels for sustainable, resilient, inclusive and gender responsive economic growth. CPD Output.1.3: Women, youth and people from the regions with high poverty rate benefit from improved services and infrastructure, better skills, access to resources, sustainable jobs and livelihoods [↑](#footnote-ref-35)
35. Component 1Improved digital skills development in the system of formal education [↑](#footnote-ref-36)
36. Digital skills and entrepreneurship in KyrgyzstanUNDP%20Digital%20skills%20Report%20Final%2027\_04\_2020\_ENG.pdf [↑](#footnote-ref-37)
37. Digital skills and entrepreneurship in KyrgyzstanUNDP%20Digital%20skills%20Report%20Final%2027\_04\_2020\_ENG.pdf [↑](#footnote-ref-38)
38. “Digital skills and entrepreneurship in Kyrgyzstan? Project Expert Report by Aziz Soltobaev. Based on this framework product, UNESCO has developed the Digital Literacy Global Framework, designed to help countries develop national literacy structures, curricula, and an assessment framework to achieve SDG thematic Indicator 4.4.2: “Percentage of youth/adults who have achieved at least a minimum level of proficiency in digital literacy skills”. [↑](#footnote-ref-39)
39. It is interesting to note that the team leader in this mission/consultancy, he became the ministry of education – Almaz Beyshenaliev, and of course – he accepted the proposal. [↑](#footnote-ref-40)
40. Improved, connected, and integrated existing systems with educational services are used and disseminated among other institutes and colleges under KSTU and OshTU:

    Google G-Suite for Education;

    Microsoft 365 for Education;

    International education service "eduroam."

    Additional 3 (International Alatoo University, Chui University and private high school) private universities were connected to the Oracle Academy and at least 1,000 students and 50 university teachers benefited from that practice. [↑](#footnote-ref-41)
41. For instance, the 2019 progress report mentions that During assessment of the selected pilot educational institutions a number of shortcomings were identified in ICT infrastructure.

    * Lack of computer lab equipment (currently very old computers are used)
    * Poor network infrastructure (universities are not fully covered by LAN)
    * Extremely poor Wi-Fi infrastructure (students are not able use Wi-Fi at all)
    * Lack of servers and storages
    * Lack of IT services for students
    * Inexistence of IT incubators

    [↑](#footnote-ref-42)
42. Component 2: Established ITHubOsh in Osh City for young entrepreneurs and application of new learning models in non-formal educational settings [↑](#footnote-ref-43)
43. It is interesting to note that the project appropriately followed some guidance developed as part of the market research studies conducted at the beginning of its implementation. For instance, as far as the hackathon and hackfest is concerned, Training were developed on YouTube, which was one of the recommendations of the digital skill study financed by the project [↑](#footnote-ref-44)
44. Osh offered a 986m2 building in the center of the Osh city [↑](#footnote-ref-45)
45. Some universities mentioned that there is a system in place to measure teachers learning outcomes yet the consultant did not receive information on what this system looks like, what the indicators are etc. . w [↑](#footnote-ref-46)
46. However, it should be noted that some documents do mention that some of the events did include some questionnaire to evaluate the impact on them on the participants For instance, the evaluation reviewed one questionnaire used for one hackaton that included the following elements: The document contains answers of participants of hackaton. 25 answers. The evaluation questions: time, what event they visited, did hackaton met their expectations, relevance of the event, what team they were in, did they feel comfortable to work in the team and mentor, whose speeches they listened, usefulness of speech, evaluate event in general, do you want to participate again? recommendations, what useful skills they gained, etc [↑](#footnote-ref-47)
47. An analysis of the impact of the project on the overall innovation/entrepreneurship ecosystem should start form an in-depth analysis of all the elements that constitute such an ecosystem such as the number of accelerators/incubators, access to finance, easiness to start and registering a business etc See sustainability section [↑](#footnote-ref-48)
48. As a result of the hackathons, 304 participants were technically supported. 33 finalists started to earn money (11 women, 22 men). 2 of them showed their patent certificates. Nurbek created 3 jobs, he has 1 artist and 2 animators on a piece-rate salary. [↑](#footnote-ref-49)
49. However, as mentioned above UNDP had several procurement challenges to do that effectively [↑](#footnote-ref-50)
50. • In paragraph 1.1. it is stated, “National Strategy of Digital Skills Development are approved by the Government Decree.” It is proposed to change this paragraph to: “Develop and introduce the National Strategy of Digital Skills Development with recommendations for the consideration to the Ministry of Education and Science of the Kyrgyz Republic.”

    • In paragraph 1.2 it is stated, “500 students participated in new training program”. It is proposed to change this paragraph to: “Develop and introduce recommendtions for new 1-2 educational standards and curriculum”.

    • In paragraph 1.4. it is stated, “100% student employment after graduation”. It is proposed to change this paragraph to: “Non-formal education includes recommendations based on recently developed educational standards and training programs for the training of at least 500 participants”.

    • In paragraph 2.1 of the second component, it is stated: “The current IT hub in the Osh region with 200 permanent residents”. Given the real market of this sector observed in Bishkek, it is proposed to change this paragraph to: “a fully functioning IT center in the Osh region with a minimum of 50 permanent residents in the short term.” [↑](#footnote-ref-51)
51. The 2019 Progress report mentioned indeed that’ An RFP tender has been announced and held, due to some legal clarifications on the quality of documents submitted by the finalist, the UNDP procurement department is awaiting clarification from headquarters. [↑](#footnote-ref-52)
52. This includes the leading UNDP, academia and project partners. [↑](#footnote-ref-53)
53. It should be mentioned that some of those obstacles were within the control of the project and some outside its control [↑](#footnote-ref-54)
54. Capacity building of new generation of IT teachers and raising awareness of new learning methods, including designing and prototyping new learning products for girls and youth with special needs [↑](#footnote-ref-55)
55. MDD is also a successor to the state committee of information technology and communications, meaning that previous committee has transformed into ministry with more functionalities and activities.

    The project did support the MDD in a series of endeavours (creating digital platforms during lockdown, around public awareness and public relations). [↑](#footnote-ref-56)
56. the Ministry of Digital Development stated that it has a specific direction on development of digital skills throughout the whole country and should also focus on that. [↑](#footnote-ref-57)
57. For inspiration, see the “search framework” from Harvard University, the Objectives and Key Results from Google or the Rapid Results Approach [↑](#footnote-ref-58)
58. GOVTECH in Europe [↑](#footnote-ref-59)
59. As mentioned above, it is expected that the evaluation team will know about the activity youth participated in prior to the interview. [↑](#footnote-ref-60)
60. Taylor 2001 [↑](#footnote-ref-61)