SCIENCE & TECHNOLOGY AND INFORMATION TECHNOLOGY DEPARTMENT

GOVERNMENT OF KHYBER PAKHTUNKHWA

PC-1

Early Age Programming & IT Essentials for the Children of Government Schools of Merged Districts of Khyber Pakhtunkhwa

ADP No.	923-190251
Forum	DDWP
Total Duration	18 Months
Total Cost	PKR 38.780 Million

Prepared by:

KHYBER PAKHTUNKHWA INFORMATION TECHNOLOGY BOARD

GOVERNMENT OF KHYBER PAKHTUNKHWA

February 2020

#	Description	Detail
1	Name of the Project	Early Age Programming & IT Essentials for the Children of Government Schools of Merged Districts of Khyber Pakhtunkhwa
2	Location	1. **Khyber District:** (GHS Kohi Sher Hider bara, GHS Jan Khan Kalli bara, GGHS mawaz Kali bara, GGHS Gulabad Jamrud) 2. **Orakzai District:** (GHS Tooti Bagh, GHS Ghiljo, GGHS Mirobak, GGHS Sarobi)
3	Authorities responsible for: (i) Sponsoring (ii) Execution (iii) Operation & Maintenance (iv) Concerned Federal Ministry	 (i) Science & Technology and Information Technology Department (ii) Khyber Pakhtunkhwa Information Technology Board (iii) Khyber Pakhtunkhwa Information Technology Board (iv) N/A
4	(a) Plan provision (i) If the project is included in the medium term/five-year plan, specify actual allocation. (ii) If not included in the current plan, what warrants its inclusion and how is it now proposed to be accommodated. (iii) If the project is proposed to be financed out of block provision, indicate: Total Block Provision: Amount already committed: Amount proposed for this project: Balance available:	 (i) N/A (ii) N/A (iii) N/A

	(b) Provision in Current Year ADP 2019-20	PKR 3.7 Million.
5	Project Objectives	i. To establish eight (08) IT labs in government schools of two merged districts (Khyber & Orakzai) of Khyber Pakhtunkhwa. ii. To introduce computer programming in eight (08) Government schools (4 boys & 4 girls) across two newly merged districts (Khyber & Orakzai) of Khyber Pakhtunkhwa. iii. Capacity building of existing IT Teachers of eight (08) government schools of two newly merged districts (Khyber & Orakzai) of Khyber Pakhtunkhwa. iv. Training of 1000 students of Class-VI to Class-VIII of eight (08) government schools of newly merged districts (Khyber & Orakzai) of Khyber Pakhtunkhwa on block based computer programming v. To raise awareness about Early Age Programming & IT Essentials.
6	Description, justification and technical parameters	Education system of newly merged districts of Khyber Pakhtunkhwa currently does not actively promote innovation at a young age, and a key subject that can address this, Computer Science is often highly neglected. Early Age Programming & IT Essentials Project is an opportunity to bring programming to Classrooms in a fun and immersive manner. It also has the capacity to create effective learning environment based on access to Information Technology. In order to promote innovation at young age, KPITB took the initiative of "Early Age Programming & IT Essentials for the Children of Government Schools" in 2017. In the Phase-I of the project from January 2017 to December 2017, 3000 students and concerned IT Teachers of 57 Government Schools in 13 districts were trained on EAP curriculum. In the Phase-II of the project from January 2018 to June 2019, the initiative was extended to 300 Government Schools of 14 districts, wherein 17,000 students and IT Teachers of the respective schools were trained on EAP curriculum. The curriculum developed for the Early Age Programming initiative is by far the most advanced in the country, leaving behind the curriculum offered by most of the renowned private school, and has enabled students to develop mobile Apps, Animations and Games with the help of block Programming tools. Early Age Programming project has produced remarkable results and the computer literacy, digital skill level, Analytical Skills, Problem Solving and Decision Making Skills of the marginalized students of Government Schools of Khyber Pakhtunkhwa has improved significantly through drag and drop computer programming. Early Age Programming students of government schools of Khyber Pakhtunkhwa made history by grabbing the top three positions in early age programming category all over Pakistan, in COMPPEC 2019 (Computer Project Exhibition and Competition), an annual event hosted by the Department of Computer Engineering NUST, Islamabad. The salient features of Early Age Programming & IT Essentials Project are as follows: • *A campaign that raises awareness for the need of programming in schools.* • *Allows genius to learn to programme.* • *Is fun, provides multiple levels of fully interactive courses built on micro-projects which build confidence and allow self-study and learning.* • *Promote Analytical, cognitive and problem solving skills through algorithm and programming.*
7	Capital cost estimates	Annexure-A

8	Annual operating and maintenance cost after completion of the Project	Maintenance of the equipment installed in IT labs will be performed from school fund on need basis after the completion of the project.
9	Demand and supply analysis	Information Technology is becoming an integral part of our lives. The future is digital and computer programming will become an essential skill for the future generations. In order to remain competitive in the digital world, it is essential that coding and programming become a part of the curriculum at an early age. In the future, not knowing the language of computers will be as challenging as being illiterate or innumerate. ST&IT department want our new generation to be producer of technology rather than the consumers of technology. To inculcate the essence of software development, promote analytical thinking and envision the youth with technologies of future, it is critical to revamp the existing IT curriculum and align it with international standards.
10	Financial Plan and mode of financing	100% Financing by Government of Khyber Pakhtunkhwa: | Fund By	2019-20	2020-21	Total (PKR)
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ADP	3.29 Million	35.49 Million	38.78 Million	
11	Project benefits	i. Skills development of government school students. ii. Improvement in computer literacy of government school students. iii. Development of analytical and logical thinking of government school students. iv. Awareness about contemporary education and skills. v. Capacity building of government school IT staff early age programming technologies. vi. Quality Education. vii. Industry and innovation. viii. Reduce inequality.
12	(a) Implementation schedule (i) Indicate starting and completion date of the project (ii) Item-wise/year-wise implementation schedule in line chart co-related with the phasing of physical activities.	(i) Date of Start: After Issuance of Administrative Approval. Date of Completion: 18 months after the start date. (ii) Annexure-D

| | (b) Result Based Monitoring (RBM) Indicators. | (b) |

INPUTS	ACTIVITIES	OUTPUT	OUTCOME	IMPACT
✓ Human Resources ✓ Financial Resources ✓ Equipment	✓ Project staff recruitment ✓ Training of recruited trainers on EAP course curriculum ✓ Training of IT Teachers on EAP course curriculum ✓ Schools and students Selection ✓ Imparting training to students and delivering course contents ✓ Student assessment	✓ One thousand (1000) students of eight (08) government schools of two Newly Merged Districts (Khyber & Orakzai) of Khyber Pakhtunkhwa trained on Early Age Programming Curriculum. ✓ IT Teacher of eight (08) government schools of two Newly Merged Districts (Khyber & Orakzai) of Khyber Pakhtunkhwa trained on Early Age Programming Curriculum. ✓ IT labs established in eight (08) government schools of two Newly Merged Districts (Khyber & Orakzai) of Khyber Pakhtunkhwa.	✓ Capacity Building ✓ Human Resource development ✓ Awareness about Early Age Programming & IT Essentials ✓ Establishment of IT labs	Encouraging and empowering government school students, in their current status, in their current school with the power to programme

13	Management structure and manpower	
	(i) Administrative arrangements for implementation of the project	Annexure-A
	(ii) Manpower requirements during execution and operation of the project	Annexure-B

	(iii) Job description, qualification, experience, age and salary of each job be provided	Annexure-C
14	Additional projects/decisions required to maximize socio-economic benefits from the proposed project to optimize the investment being undertaken on the projects.	Not Applicable

List of Annexures

A   Total Estimated Cost
B   Project HR
C   Job Descriptions
D   Implementation Schedule
E   Bill of quantities
F   IT Lab layout
G   Early Age Programming course outlines