EDTECH

CREATING WAVES IN PAKISTAN

THE IMPORTANCE OF EDUCATION

for the socio-economic development of a country is not an unknown fact.

As quality education is the SDG number 4, governments, private institutions and charities have been working tirelessly to achieve universal access to education.
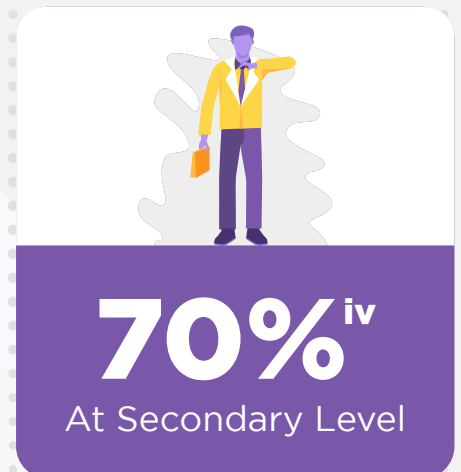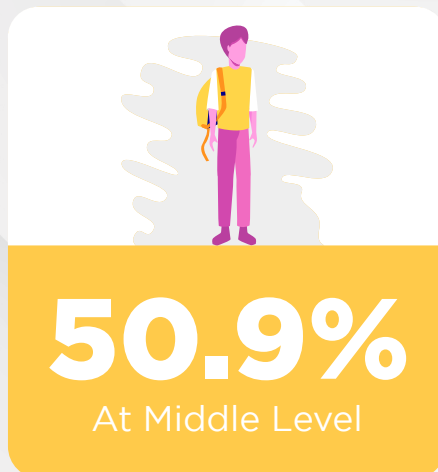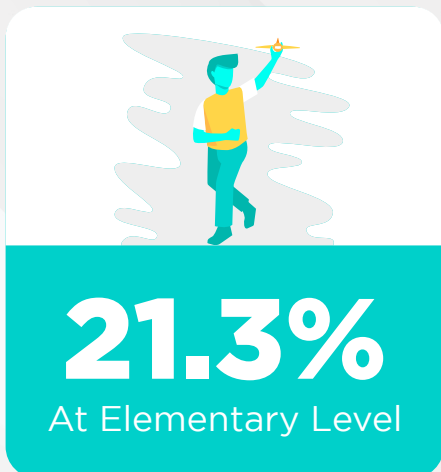
However, as of 2019, UNESCO has reported that almost 260 million children do not have access to quality education worldwide.[i]

With the onset of COVID-19, in 2021, UNESCO has reported that children have lost an average of 74 days of education worldwide.[ii]

Focusing on Pakistan, with a population of **212 million**[iii] including a surging youth population, the country presents a particularly unfortunate scenario when it comes to education. As of 2020, the percentage of out of school children is:

21.3%
At Elementary Level

50.9%
At Middle Level

70%[iv]
At Secondary Level

The problems surrounding the access to education are manifold. However, majority of the problems revolve around cultural restrictions, economic status and geographical boundaries.

Although **Pakistan is classified to have a 59% literacy rate,**[v] the reality is very different especially in remote areas.

Given this scenario, Pakistani's startups and companies have leveraged the opportunity to bring about change in the educational realm of Pakistan, by investing in, and digitalizing traditional methods of learning through EdTech. There are ample opportunities for international organizations to work with these companies.

EDTECH OFFERS
ENTIRE DIGITAL SOLUTIONS
TO LEARNING

According to the Association for Educational Communications and Technology (AECT), EdTech is "the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources"

There are several animated TV series such as Burka Avengers, Quaid Say Baatein and Taleemabad's digital series that became highly successful and became a brand in themselves before and during COVID times.

These animated series helped children develop interest, as well as taught them important life lessons such as the importance of privacy and safety, money management, honesty, hard work and many more.

Source: aurora.dawn.com

The different range of products and services that are being offered in Pakistan include digital lessons for primary, secondary, high school and university students. Additionally, there are also platforms providing continuing education lessons in fields such as digital marketing, entrepreneurship, programming and research for professional development. These lessons are often streamed live. However, some of the lessons are also pre-recorded and can be downloaded to be accessed later. EdTech has also transformed instructional methods for teachers. Apart from replacing traditional methods of learning with gamified and animated content, the time and cost of attendance, exam papers and assessment has been reduced as well. Now through a learning management system (LMS), teachers can contribute to blended and online learning as well as manage attendance, assessments and grading. Institutions in Pakistan including NUST, Habib University, IoBm and Quaid-e-Azam University as well as schools including Beaconhouse, Allied Schools, Westminster Headstart, ASAS, Roots, ICAS and The City School have shifted to LMS and blended learning.

EDTECH SERVICES OFFERED BY STARTUPS IN PAKISTAN

Service(s)	Company(s)
DIGITAL LESSONS (SCHOOLS)	The Learning Hut, Nearpeer, Learning Pitch PK, Edvon Robotics, Luminis, Edkasa, Unicorn Black, Orenda Project, Knowledge Platform, Sabaq, Edtechworx, Orbit-ed, Dot & Line, DESK
DIGITAL LESSONS (CONTINUING EDUCATION AND THE FUTURE OF WORK)	Code Girls, Digiskills.pk, Air School, Tech Karo, Dice Analytics, Educast, Xtreme Commerce, Skillsfirst, Alight Pakistan, Amal Academy, Trainers Tribe
TUTORING PLATFORMS	Noon Academy, E Tuition Hub, Tutor Bay, Student Park, Learning Bytes, Tutor Point
DIVERSITY & INCLUSION FOCUSED LESSONS AND TRAININGS	Deaftawk, Boltay Huroof, Connect Hear, Wonder Tree
EDTECH SERVICE PROVIDERS FOR LMS	ElearnSol, The Learning Hut, Learning Pitch PK, Zama School, E Learning Pakistan, MDi Pakistan, Icreativez Technologies, Zera Creatives, Zillion elearning, ELN, Zama School
EDTECH SERVICE PROVIDERS FOR ASSESSMENT AND MATCHING	Learning Pitch, Red Markers System, Query City, Daakhla, Unidesk

ADMIRABLE EDTECH ORGANIZATIONS

UNICORN BLACK

A multi-award-winning company focusing on education, animation, music, art and technology, Unicorn Black has done tremendously well in this industry by starting the animated series Burka Avenger. Portraying the first female superhero of Pakistan, Burka Avenger was a huge success.
The story of Burka Avenger was that of a schoolteacher who taught in the morning and fought crime at night. Burka Avenger quickly grabbed the attention of the local audience.

Source: cdn.cnn.com

> "We've provided quality educational content without any local support. I must say that there is an incredible amount of talent in Pakistan's youth, without a doubt."

Haroon Rashid,
CEO & Founder at Unicorn Black

The series was also launched in India and Indonesia, which has been a huge success for the company. Children watched and learned from Burka Avenger. With the onset of COVID-19, Unicorn Black launched an AR focused learning app by the name of Burka Avenger, which includes learning guides for school-going students up to the age of 16 and teachers, vocabulary tests and lectures.[vi]

ORENDA PROJECT

Since the past 4 years, Orenda has worked to reduce the divide between public and private schools by providing engaging, digital education to the masses, focusing on K-5 (Primary) grade. Orenda Project has provided the National Curriculum of Pakistan digitally to almost 90,000 children across Pakistan.[vii] The very inspiring team at Orenda started out as teachers themselves and opened schools in the slums of Pakistan. To date, Orenda Project has 8 franchise schools in Pakistan known as the Taleemabad schools.

Before launching, the team spent time with children and parents in underprivileged areas to understand their educational needs. After gathering all the data, Orenda launched Taleemabad series which was then turned into an app, digital content and textbooks. Taleemabad series is broadcasted on national television on various channels including PTV and ATV. The Taleemabad App includes AI technology, which begins to learn about the children's progress with every assessment. The app then provides recommendations to help children reach desired learning outcomes.

"

Even if schools close down, learning doesn't stop.

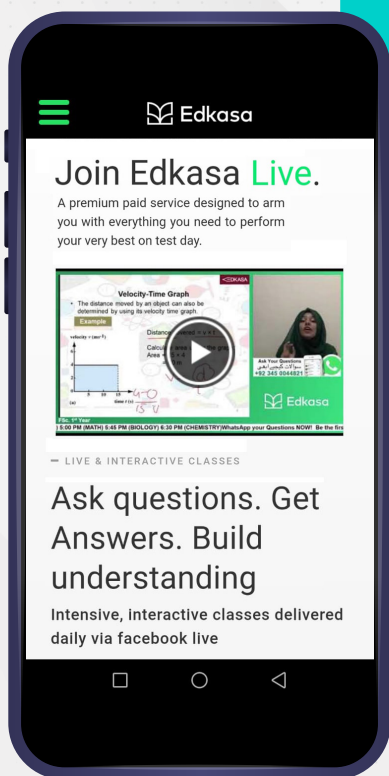**Daniyal Zia, Strategist at Orenda Project**

EDKASA

Edkasa works to prepare high school to college students for exam day, involving a STEM curriculum. Edkasa provides live online lectures through their own website, and social media as well. In Edkasa Basic, students have 5 minutes free access to lectures and in Edkasa Live, students can interact with teachers live through Facebook, solve past exam papers and ask any questions during the lectures.

"At Edkasa, we've been able to help a lot of kids in far flung areas, and solve real problems. Currently, we have 60,000 active students and over 40 schools in the most remote parts of Pakistan. We're proud to have generated this kind of impact. Furthermore, we need to stop teaching things that waste time, instead, we have to focus on innovation. We also need to build upon continuing education courses for adults."

Fahad Tanvir, CEO at Edkasa

Join Edkasa Live.

A premium paid service designed to arm you with everything you need to perform your very best on test day.

— LIVE & INTERACTIVE CLASSES

Ask questions. Get Answers. Build understanding

Intensive, interactive classes delivered daily via facebook live

Edkasa is one of the EdTech organizations in Pakistan that raised $320,000 in pre-seed funding in April 2021.[viii]

KHALID   FSC, Pre-Engineering Student

I am not afraid of any difficulty. I know there is an EDKASA video for every concept.

RED MARKER SYSTEMS

The Red Marker System team believes in eliminating the strenuous practice of manual assessment for all educational levels which is time-consuming and costly. Gul Zeba, CEO and Founder at Red Markers, with more than 10 years of experience in the assessment industry, believes in implementing technology for assessing descriptive papers. The major software provided by Red Marker is rMarker, which is designed to ensure transparency and to reduce any human error in marking, and rTestGen which digitizes and manages item creation, paper generation and development.

"Proudly, we are the first EdTech company in Pakistan, digitalizing the whole assessment industry in any board"

Gul Zeba, CEO & Founder at Red Marker System

BOLTAY HUROOF

Pakistan's Braille Translator software, Boltay Huroof assists the visually impaired. This includes Urdu to braille code transformation, and braille code into read-aloud Urdu content. The software also includes a word correction algorithm, thereby ensuring correct Urdu grammar for the visually impaired. Recently, Boltay Huroof was invited by Zarrar Khurro, famous anchorperson and journalist, on "Zara Hat Kay" to speak about how Boltay Huroof is helping the visually impaired in Pakistan, through education and job creation. In December 2020, Boltay Huroof also won "Best Startup" at a competition held by Awesome Foundation, UK.[ix]
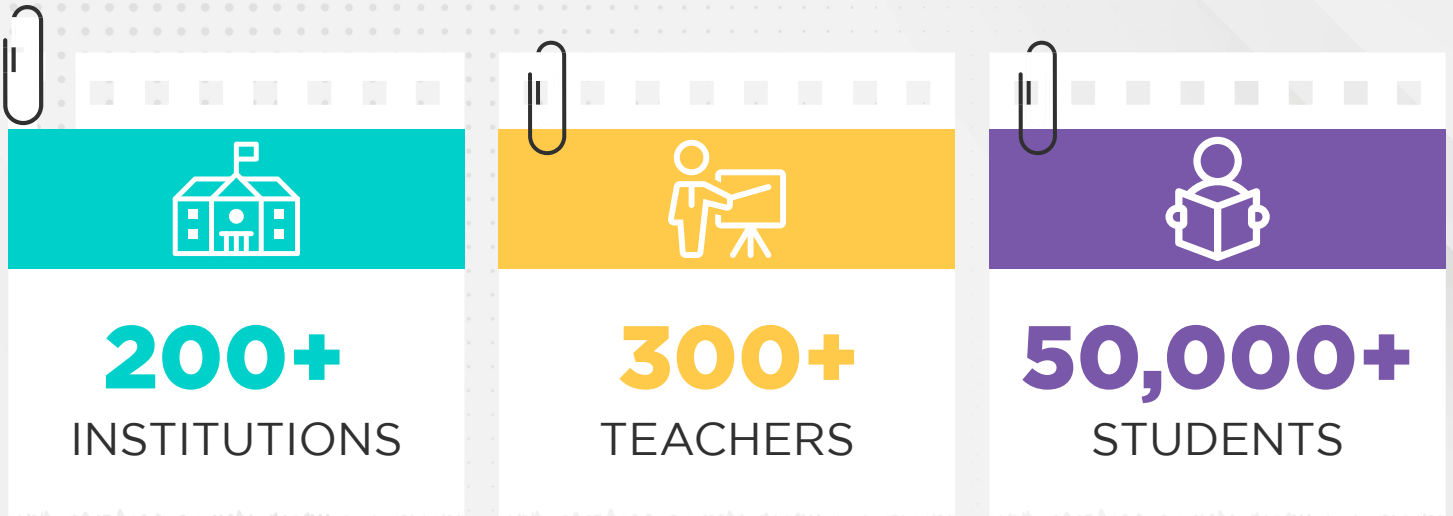
"We started with the problem in our nation: unavailability of braille books in our National language Urdu. We have developed the software Boltay Huroof for Urdu, Sindhi and English and now working on Arabic, other regional languages and all global languages. Our aim is to make braille books accessible to all the blind community in the world."

Umer Farooq, CEO at Bolay Huroof

ZAMASCHOOL

ZamaSchool is an educational platform, that aims to streamline the communications process between parents and teachers from primary to high school levels. To date, ZamaSchool has digitized:

200+	**300+**	**50,000+**
INSTITUTIONS	TEACHERS	STUDENTS

ZamaSchool is also present in 15 rural areas of Pakistan.[x]

With the ZamaSchool App, students can view their attendance, test results and timetable, teachers can view their schedule and syllabus and parents can view relevant information related to their child's performance.[xi]

Another product by ZamaSchool is ZamaClassroom, which is a technology-driven platform for students and teachers alike. Students are able to access high-quality and engaging curriculum, and are also able to track their performance online. Teachers on the other hand, are able to plan their lessons accordingly, use the smart attendance, exam paper, quizzes and MCQ's generator and also follow their students' performance.[xii]

CONNECT HEAR

Connect Hear is a social-startup which works towards sign language accessibility and deaf inclusion in Pakistan. The startup, which is also Epiphany's portfolio company, provides interpreter trainings and translation services for diverse content such as vlogs, commercial advertisements, social media content, songs, articles and any other content.[xiii]

Connect Hear also provides courses on learning sign language for individuals, universities and companies. The basic sign language course can be learnt from the comfort of one's home, which is taught by Azima Dhanjee, CEO at Connect Hear. Connect Hear initiated "ConnectTV", which is an infotainment platform in which content is translated into sign language for accessibility.[xiv]

"We've established ourselves as trailblazers in terms of making our nation more inclusive for the hearing-impaired by introducing creative initiatives such as Pakistan's first-ever Deaf-inclusive concert with Strings at Habib University and a Deaf Theatre Competition with the National Academy of Performing Arts. We have previously worked with various organizations including but not limited to Unilever, Telenor, Daraz, MALC, BBC Urdu, Careem, and STEP. Connect Hear has been recognized for its efforts by multiple local and international publications such as Forbes, Pioneer Post, Dawn News, Geo News, The Diana Awards, among others. In December 2020, we have launched our one-tap virtual interpretation service that aims to connect a deaf individual instantly and remotely to a sign language interpreter. We are positive to see the impact it creates in our society."

Azima Dhanjee, CEO at Connect Hear

KNOWLEDGE PLATFORM

Also known as one of Pakistan's 21st century K-12 backbone, Knowledge Platform provides skills-based learning and a virtual classroom environment. Currently, Knowledge Platform has **100,000+ learners** across the world and has tapped **20+ countries**. Additionally, through this platform, **2000+ courses** have been developed and **3700+ teachers** have been trained.
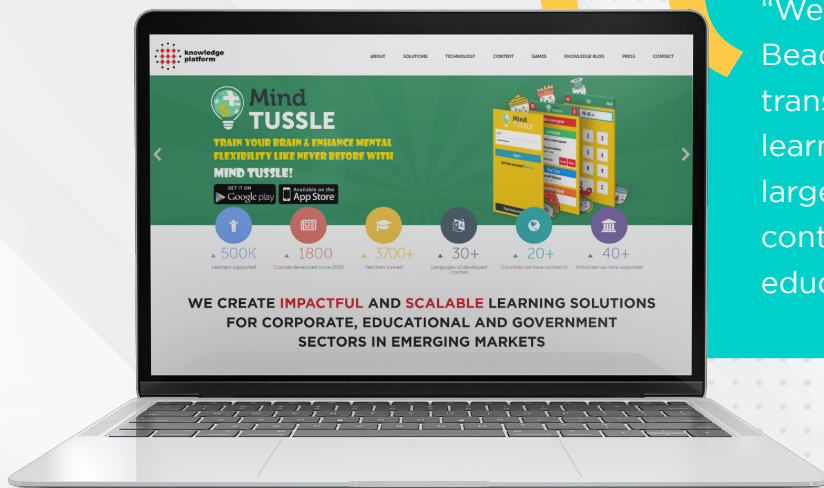
> **KENNETH WONG**   Health Science Authority
>
> "We're thoroughly impressed by KP's reasonable pricing, quality production, as well as keen understanding of client's business needs and goals. I have no hesitation to recommend KP for future e-learning projects within and outside of HSA."

Knowledge Platform has also leveraged its relationship with other industries to facilitate e-learning. As a part of their COVID-19 response in July 2020, Knowledge Platform signed a deal with Jazz, one of Pakistan's leading digital service provider, which introduced a special bundle of 10GB data in just Rs. 150, through which over 270,000 students across Pakistan could access Knowledge Platform's educational content for an entire month.[xv]

Furthermore, in October 2020, Knowledge Platform signed a deal with Beaconhouse School System, to provide its EdTech content to 100 schools and over 100,000 students falling under Beaconhouse School System in Pakistan and seven other countries.[xvi]

> "We are thrilled and honored to serve Beaconhouse through this landmark transaction. In terms of numbers of learners, this may represent the world's largest education technology deal contracted to date in the private K-12 education sector."
>
> **Mahboob Mahmud, Founder at Knowledge Platform**

CODEGIRLS

A women-empowerment initiative and a movement to make tech more inclusive, CodeGirls provides vocational IT and business trainings to women who have not previously been educated in technology. As of 2021, CodeGirls has graduated 580+ women through its courses in HTML5, CSS, JavaScript, JQuery, Entrepreneurial skills, Financial Literacy, Soft Skills, Solopreneurial Skills, Work Readiness, HR Law and Dealing with Workplace Harassment.[xvii]

ERUM FATIMA   Phase 1 Graduate

CODEGIRLS is not just a program of coding websites but a program of coding girls' personalities. I must say that joining this program has changed my way of thinking and helped me to choose my path of life. Thank you CODEGIRLS!

EDVON ROBOTICS

EDVON has been working with a mission to transform the old methods of textbook learning and providing a blended-learning mechanism for teachers and students alike, focusing on transforming outdated methods. This platform provides technology-based content for students, particularly STEAM education for kids aged from 6-18. EDVON also works with public and private schools to inculcate STEAM curriculum as a part of their syllabus.

"EDVON is one of the EdTech platforms in Pakistan, which is providing coding and robotics concentrated DIY kits for students."

**Muhammad Nabeel,
Managing Director at EDVON Robotics**

Lay The Foundation For Next Level Of Programming

15+
COMPUTING CONCEPTS

100+
ACTIVITIES

500+
HOURS OF PRACTICE

EDTECHWORX

EDTechworx connects students, institutions and teachers through its digital course creation platform. Through its platform, virtual courses, classrooms and self-paced learning are facilitated without any reliance on third party platforms. Hence, at EDTechworx, educational content is provided to primary to high school level students and digital platforms are provided as a service for any academic institution or teacher to facilitate their online lectures.

DOT & LINE

Focusing on Mathematics and English, Dot & Line provides trained tutors and a learning pack for grades 1 to 12 that can be delivered to door steps which are curated to facilitate a child's online learning. Dot & Line also offers learning activities, in which children get to learn through music, dance, games and much more. Through Dot & Line, online tutors can be booked. Learning packs offered by Dot & Line include educational content through illustrations, worksheets, learning blocks, color booklets and thinking games in English and Mathematics. In 2019, Dot & Line received funding from Sarmayacar. Apart from facilitating learning, Dot & Line has also been a source of financial independence for many.[xviii]

FACEBOOK TESTIMONIAL

"We are having a wonderful experience with Dot & Line. They are using innovative ways of teaching and learning. They have a great approach for students to learn new things in different ways."

LEARNING PITCH PK

Learning Pitch gets its inspiration from the quote

> **Education is the most powerful weapon which you can use to change the world**
>
> - Nelson Mandela

Through its platform, Learning Pitch is using EdX technology to provide video recorded MOOCs. Owing to its excellent user experience, Learning Pitch received the "Best EdTech startup by P@SHA" and secured third prize for the National Health Hackathon in April 2020. Furthermore, its educational content for primary to high school level students has been telecasted on PTV amidst COVID-19 on PTV Tele School.

SABAQ

Sabaq is an EdTech platform offering educational content of high quality that increases engagement and is fun for students from primary to high school levels to watch. Sabaq's educational content includes story-based instructional videos, animated content, teacher and student guides and fun exercises. Sabaq's impact has shown that its content has been able to expand the knowledge, awareness and aptitude of students. In a study conducted by National Rural Support Program, it was found that 89% of low scorers had started to perform well after learning from Sabaq at Punjab Education Foundation.[xix] One of the notable projects by Sabaq is MUSE by Sabaq, for which the content includes colorful and captivating animated characters, with interesting storylines, which grasp attention and facilitate learning. MUSE by Sabaq resources also consists of innovative ways to help teachers in offering their lectures.

LUMINIS

A cloud-based learning and engagement platform, Luminis engages with users using email, SMS, social media, website and provides content management, content throttling and in-depth engagement analytics. The platform allows organizations to educate, train, and engage with their stakeholders with cost-effectiveness. One of the notable projects has been the deployment of Luminis in "Educate a Child", a program by the Government of Pakistan, PAGE and ALIGHT, in collaboration with Education Above All Qatar, in which the software is being used to train teachers. The platform has enabled the Government of Pakistan to save infrastructure cost by providing an online solution to training and providing quality education to primary school children.[xx]

Luminis is one of our innovative technologies that provides intelligent content distribution to learners with limited resources and at challenging locations. It requires minimum infrastructure and connectivity to receive customized learning via email or SMS. Luminis has helped over a million learners from around the world.

Syed Shahzad, Founder at Luminis

ED TECH

TOUCHDOWN FOR OPPORTUNITY OR NOT?

EdTech presents an untapped land of opportunities in Pakistan, with the increase in smartphone usage, internet users and the onset of COVID-19.

According to Digital 2021: Pakistan, there were 61.34 million internet users and 173.2 million mobile connections in Pakistan as of January 2021. Furthermore, internet penetration in Pakistan stood at 27.5% in January 2021 which is a 21% increase from 2020.[xxi]

Furthermore, Pakistan has the second highest number of out-of-school children, which need to be targeted for newer, better education.

These figures provide a space for emerging as well as existing EdTech startups to provide edutainment and online educational content to students, teachers and continuing education adults to reduce the burden of manual learning techniques. Additionally, quoting Daniyal Zia from Orenda Project, there is huge opportunity for emerging EdTech startups to travel to the remote areas of Pakistan and assess the challenges and opportunities that exist.

However, while there are opportunities, the challenges and threats to entry faced in this industry cannot be denied. The most common challenges, some of which the listed organizations can also relate to, are as follows:

1 LIMITED AIRTIME

With many EdTech companies now having access to TV channels to promote their content, there is limited space available for each company's individual educational content. As EdTech startups differ in their audience and the educational content that they are promoting, the limited airtime available can clash. This can also depend upon the access of TV boxes and smartphones available. For example, if there is a household with one TV box and more than one recipient for EdTech products and services, they will have to wait their turn. However, this challenge can be solved by de-regulating smartphone usage and ensuring equal access to internet services. Hence, fixing the digital demand in Pakistan.

2 LOW ADAPTATION RATE

Though EdTech companies have worked hard to keeping learning going, developing countries such as Pakistan have found the adaptation fairly difficult.[xxii] This adaptation has been difficult for teachers, parents and students alike. There has been an added responsibility on parents to ensure that their children are attending their online lectures.

In underprivileged areas, there was already a struggle faced by the government to implement a uniform curriculum. With the pandemic, these sectors were not prepared for online learning majorly due to costly smartphones, internet access and lack of know-how on digital device usage.
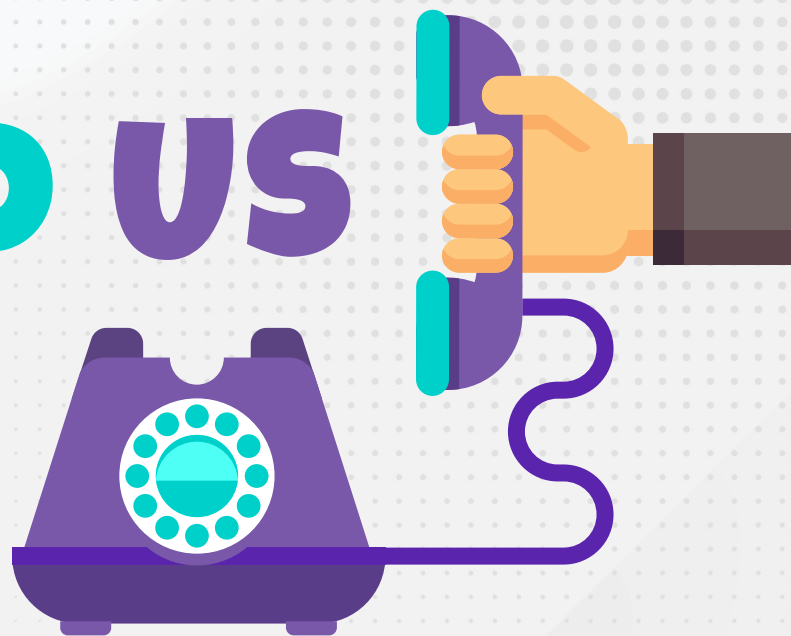
3 NEED FOR INVESTMENT

Currently, EdTech startups face a cost crunch related to updating existing technology and ensuring the smooth running of their applications. Minimizing the cost crunch is possible through increased support and investment. Globally, it has been observed that the increase in investment for EdTech has helped startups grow, scale and make their services cross national boundaries. Minimizing the cost crunch is possible through increased government support. Furthermore, the government must utilize the expertise and potential in existing startups, rather than duplicating the efforts made already in the EdTech industry. Through an interactive ecosystem, government support and investment, the EdTech industry in Pakistan will continue to thrive. To ensure that EdTech continues to flourish, it is imperative that opportunities in EdTech are well-communicated by EdTech leaders to new and potential entrants into the industry. The current products and services being offered by Pakistan, many of which have crossed borders to reach international audiences, pose an excellent pathway for collaboration between local and international EdTech service providers.

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Note: Additional information covered in this paper for different companies has been collected through one-on-one interviews and a survey form.

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ABOUT THIS INDUSTRY ROUNDUP

Pakistan Software Export Board developed this paper by hiring services of an independent consulting firm to prepare this roundup on Pakistan's EdTech sector. The paper focuses on Pakistan-based companies in this vertical and apprises the reader of the expertise available in Pakistan in the EdTech domain.

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