



Xavier's Resource Centre for the Visually Challenged (XRCVC)

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The XRCVC's Annual Report for 2020-21 (June to May)

The COVID-19 pandemic, and the ensuing series of lockdowns, ensured that school and college campuses remained largely out of bounds for students and staff, so the XRCVC's activities for the entire academic year 2020-21 were carried out online. Though this meant that our face-to-face interaction with our stakeholders was replaced by a virtual interaction, our training programmes, content-creation, and other activities continued with renewed vigour.

During the academic year 2020-21, the XRCVC launched a new one-of-its-kind offering — SHAMIL — which aims to promote inclusive education and further strengthen the inclusive education work in educational institutions across the country. As an educational institute ourselves, we have been keen to impact quality inclusive education services in other institutions. This was what led to the birth of SHAMIL, through which we offer a bouquet of services to educational institutions under a broad umbrella of a pro bono inclusive education consultancy service.

Using SHAMIL, the XRCVC plans to work with the enabling committees and coordinators at various institutions to set up end-to-end inclusive education services on campus. The XRCVC's role is consultative in nature; the main focus will be on handholding and capacity-building of the institution's on-campus systems, staff, and committee to run the service independently as soon as possible.

During the academic year 2020-21, the XRCVC entered into an agreement with Atma, a leading NGO Accelerator which provides strategic solutions to help NGOs and social enterprises to build their capacity and help them become bigger, better, and stronger.

The XRCVC worked closely with Atma during the year to develop a Strategy Plan, Logic Model Framework and an HR Organization Structure, through which we hope to evolve a robust M&E System, Leadership and Governance Models and Fundraising and Marketing Strategies.

The XRCVC endeavours to transform lives for persons with disabilities both at the micro and macro levels. Along with providing direct and indirect support at the micro level, we work closely with government agencies, corporates, researchers and educational institutions at the macro level on advocacy and sensitization initiatives — particularly in the areas of education access, financial access, print access, and independent living.

The XRCVC was initially set up as a resource and advocacy centre for persons with visual impairment. However, as an enabling unit on campus at St Xavier's College (Autonomous), Mumbai, it expanded this offering in the academic year 2018-19 to include services to students with hearing / speech impairment, autism, learning disabilities, and those with orthopaedic disabilities as well.

We disseminate information about our work to members and other stakeholders on an almost real-time basis through our website (www.xrcvc.org), our Inclusive Education Resource (https://sites.google.com/xaviers.edu.in/xrcvc-inclusive-education/xrcvc) and on social media through our Facebook page (XRCVC—Xavier's Resource Centre for the Visually Challenged) and Twitter handle (@XRCVC).



In the academic year 2020-21, St Xavier's College (Autonomous) had 106 students with disabilities on it rolls (Junior College, Senior College and Masters combined). The Enabling Committee of the college — a staff-cum-student representative committee that looks into all inclusion and accessibility needs on campus — ensured that each of these students had an enriching curricular and extra-curricular experience. The Coordinator for Students with Disability, who coordinates the activities of this committee, works out of XRCVC and is the main resource person to process all student requests and needs. In addition to meeting requirements of students on campus, the XRCVC is also actively involved in promoting inclusion and access across the country through its range of training, advocacy and awareness programmes.

Membership base

In 2020-21, the XRCVC's membership base expanded to 753 persons. But we do not restrict our offerings solely to our members. Our advocacy work allows us to touch — and hopefully transform — thousands of lives across the country.

We offer a range of direct support and training services to persons with disabilities, caregivers, educators, and institutions. Direct support provided includes scanning, demonstration of and training in the usage of assistive devices, career advice, basic computer training, software assistance, mobile phone usage training, smart cane usage training, Braille printing, follow-up with publishers for accessible copies of books, coordinating with educational institutions, banks and other financial bodies, etc.

Volunteer support

Despite all the technology and advancements, human assistance cannot be eliminated completely for persons with disability. The XRCVC provides volunteer services for:

- Reading
- Converting material into accessible formats for people with visual impairment through typing, scanning, editing, recording
- Teaching for any subject
- Examination taking scribe facilities (this service is provided in collaboration with the Student Inclusion Cell of St Xavier's College)
- Any other requirement on a need basis

Depending on the member's needs and requirements, the XRCVC provides volunteers both for short- and long-term needs. Approximately 65 volunteers worked with the centre during the year. This included many employees from a well-known company with which we started a corporate volunteering programme during the year.

Assistive technologies

The XRCVC houses an exhaustive list of assistive technologies (AT) that can be explored by persons with disability — as also employers, government bodies, and any other group that would like to know more about AT. Anyone is welcome to drop in at the XRCVC, with prior appointment and



keeping COVID protocols in mind, to explore the full range of assistive technologies and their use. The centre procured a wide range of new technologies in 2020-21. These include a set of laptops to help consolidate the work-and-learn-from-home scenario thrown up by the Covid pandemic. More copies of the screen reader, NVDA, were also acquired. A Covid-relevant technology — a talking Oximeter — was purchased and put to good use in access technology exhibitions.

Focused work areas

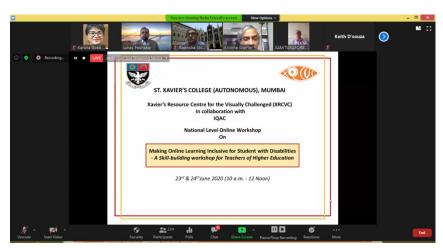
During the year, the XRCVC's activities were channelized through three main focus areas:

- a. Education & Learning (KG to PG)
- b. Accessibility Solutions and Inclusive Services
- c. Awareness

Given below is a summary of the activities in 2020-21 under each head.

A. Education & Learning (KG to PG)

While Right to Education has become a fundamental right in India, this right is far from being actualized for persons with disabilities. During the year, the XRCVC continued its work towards inclusive education practices and services at school, college, and higher education levels. A plethora of activities were conducted during the year in this connection, some of which are described below.



Webinar 'Making Online Higher Education Accessible for SwD' for faculty members of the college. It was inaugurated by the Vice Chancellor of Mumbai University, Dr Suhas Pednekar

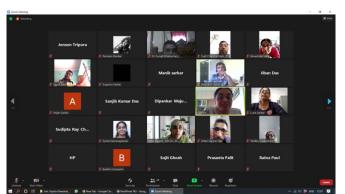
The XRCVC provided all the resources and manpower to St Xavier's College that were required to ensure the smooth conduct of the Enabling Committee's activities during the year. In July 2020, the XRCVC and IQAC of St Xavier's College conducted a webinar 'Making Online Higher Education Accessible for SwD' for faculty members of the college.

This webinar was inaugurated by the Vice Chancellor of Mumbai University, Dr Suhas Pednekar.

- Ongoing work continued with students who are part of the XRCVC's comprehensive educational offering. During the year, we also regularly conducted training and sensitization sessions at Prime Academy (Andheri) and Sacred Heart School (Kalyan).
- The other institutes we worked closely with during the year in helping the set-up of inclusive educational services are the Government of Tripura, Sir P.T. Sarvajanik College of Science

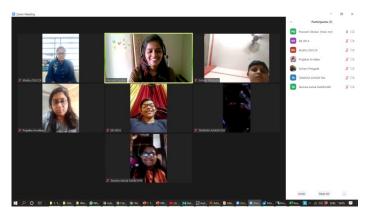


(Surat), IIT Delhi, and Dr. B.M.N. College of Home Science, SNDT university, Mumbai. In March 2020 Neha Trivedi and Poonam Deokar conducted a three-day 'I for Inclusion' training for school teachers in Tripura, as part of the Samagra Shiksha Abhiyan, Education (School) Department, Government of Tripura. XRCVC is the official training partner for teacher training as part of the Government of Tripura - Vision Empower MoU to implement inclusive school education in Tripura. A similar training session was conducted in April 2021 for the faculty of BMN College of Home Science.





Set-up of inclusive educational services with the Government of Tripura, Sir P.T. Sarvajanik College of Science (Surat) etc



Training workshops — for students with specific learning disabilities with schools like Gateway School of Mumbai, St. John Universal, and South Indian Association.

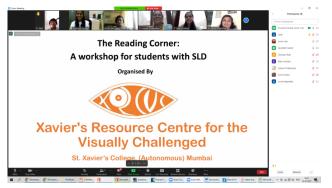
- The XRCVC has also been working with a few schools for assistive technologies training workshops for students with specific learning disabilities followed by individual support and follow-up as per requirement. These schools are Gateway School of Mumbai, St. John Universal, and South Indian Association.
- A webinar for Students with Learning Disabilities was conducted in October 2020 for Sunderji's Academy. In April 2021 XRCVC again conducted a session for Sunderji's during a workshop titled, 'Introducing Inclusion Tool Box | Assistive Technology and Teaching Aids as part of Pathways to Inclusive Schools.'
- Dr. Sam Taraporevala, Neha Trivedi, Calveena D'Sylva, and Rebecca Carvalho were invited by Sol's ARC as domain experts for their project 'The Red Flag' working on developing a screening tool to help screen learners who have mental health problems, abuse, or learning issues, for learners with special needs in Mumbai. This app is at an advanced stage of the development.
- Neha Trivedi was appointed as a member to support the Department of Psychology and education of people with visual disability at Kabul University, and she is working on a programme in special education for the university.
- Work pertaining to book content creation and accessible study material creation continued



- through the year. Both staff and volunteers are engaged in this.
- The Sub-Committee of Experts, constituted by the Ministry of Education, Government of India, to prepare the Guidelines for the Development of e-Content for Children with Disabilities, submitted its report during the year, and the same have been formally released by the Union Minister of Education. Dr. Sam Taraporevala and Neha Trivedi were members of this subcommittee. The report can be accessed at the following link: https://pib.gov.in/PressReleasePage.aspx?PRID=1725279
- We continued to collaborate with our various partners including Inclusive Stem (I-Stem), Vision Empower, Social Alpha, Inter University Alliance (IUA), and Andrews Vision Centre.
- The XRCVC, through the year, continued its ongoing pioneering work in the area of
 mathematics and science education. Students were provided direct support services. The
 centre created accessible electronic textbooks, Teaching-Learning Aids (TLAs), and provided
 conceptual training to these students. In addition, it continued to build on its TeachingLearning-Aids (TLA) resource library for mathematics and science education, starting Std 1
 onwards.
- Ongoing work continued on the production of Concept Teaching Manuals (CTMs), which have been designed for use by teachers working with blind or low vision students. Special educators or parents working on a one-on-one basis, as well as classroom teachers and tuition teachers in an inclusive classroom can incorporate the information and ideas from these manuals. These CTMs cover interactive ways to teach concepts to blind or low vision students including the use of Teaching-Learning Aids (TLAs) in the form of activities, real objects, 3D educational toys and models, 2D tactile diagrams, etc.
- In October 2020, Dr Sam Taraporevala and Neha Trivedi made a presentation on 'The Blind in STEM A Reality Check at the ASET Colloquium organized by TIFR.
- In November 2020, Dr Taraporevala participated in a panel discussion on 'Post Pandemic Education for the Visually Impaired' organized by Bookshare, Daisy Forum of India and ICEVI.
- During the year XRCVC and Maharashtra Dyslexic Association (MDA) conducted online workshops titled 'The Reading Corner' for students with specific learning disabilities.



Webinar in collaboration with the Microbiology Department of St Xavier's College and IWSA



Online workshops titled 'The Reading Corner' for students with specific learning disabilities.

• In February 2021, Neha Trivedi and Poonam Deokar conducted a webinar in collaboration with the Microbiology Department of St Xavier's College and IWSA, titled, 'Pictures and Visuals in the World of Persons with Blindness and Low Vision'.



Personal and Career Guidance

Guidance was also provided to members and their families across disabilities to identify needs, interests and aptitudes as also troubleshoot and cope with concerns.

Scholarships

New higher education avenues have been pursued by students with disability over the last decade. Along with new opportunities come new costs of higher education courses. Similarly, while assistive technologies and computers have provided immense aid to disabled students, what is often considered a luxury for those without disabilities is a necessity for the disabled. Recognizing the high costs for higher education and assistive technologies, the XRCVC provides scholarship and access technology lending schemes to deserving students. One laptop was handed over to a visually impaired student during the year. The Lions Club of East Bombay Scholarship for the year was awarded to Shubham Gupta for being the most deserving visually impaired student graduating from St Xavier's College, Mumbai during the year. The XRCVC also facilitated the allotment of higher education scholarships to seven senior college visually challenged students. Help the Blind foundation bestowed Rs. 10,000 to each of the students.

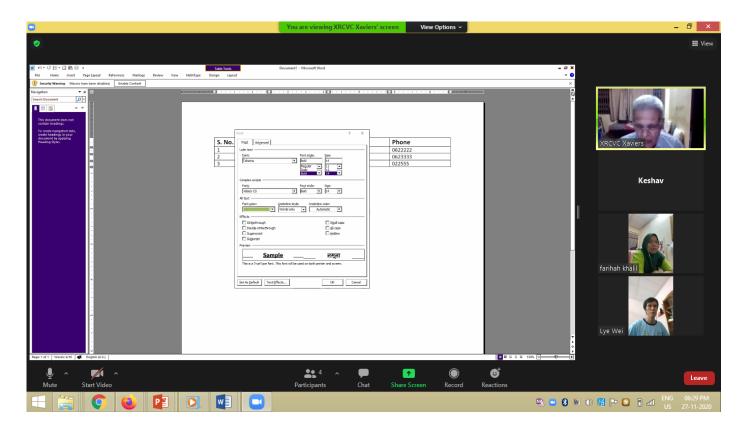
Training

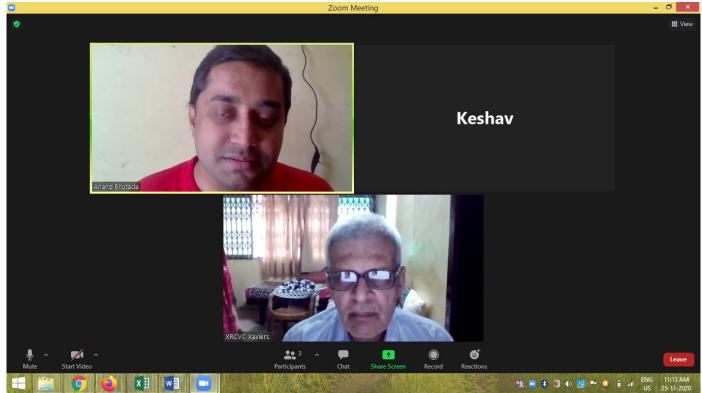
The XRCVC imparts training in Computers, the use of specific assistive devices, Braille, Orientation & Mobility, Maths & Science, English language, and Life Skills through various training programmes. These are available for diverse learner groups — disabled persons, special educators, teacher trainers, and other stakeholders. Online training sessions during 2020-21 included customized workshops by various members of the XRCVC team including Poonam Deokar, Vikas Dabholkar, Neha Trivedi, Sushil Pandit, Keshavan Nadar, Krishna Warrier, Calveena D'Sylva, Rebecca Carvalho, Aniket Gupta, and Elisha Lopez. Through the year, the XRCVC's training services reached out to a wide variety of participants (see Table 1).

Table 1: Education and Learning (June 2020 – May 2021)

Activity	Workshops	Participants
1a. Access Technology & Computer Training Workshops for	70	907
Persons with Disabilities		
1b. Special Skills Trainings for Persons with Disabilities	11	72
1c. Stakeholder Trainings (for teachers)	16	2734
1d. Access Content Creation (Persons trained)	-	164
1e. Access Content Creation (No of Pages Created). During	-	6492 (pages
the academic year 2020-21, the		created)
XRCVC produced 37 accessible books		
(totaling 4479 pages) and additionally 2013 Word pages of		
class notes.		
1f. Guidance Support for Persons with Disabilities and	-	59
Families		
1g. Inclusive Education Support (For St Xavier's College	-	106
Students)		

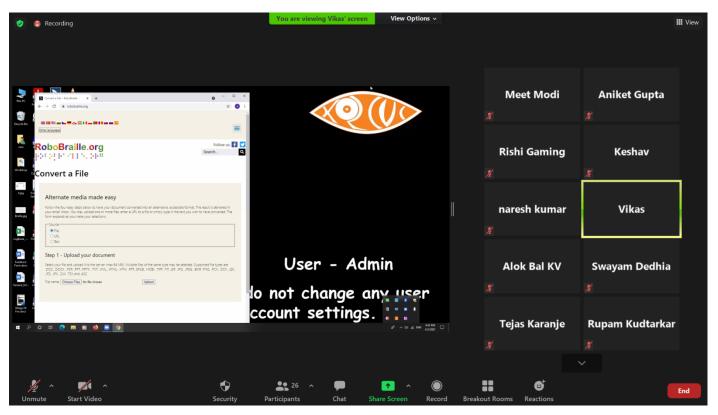




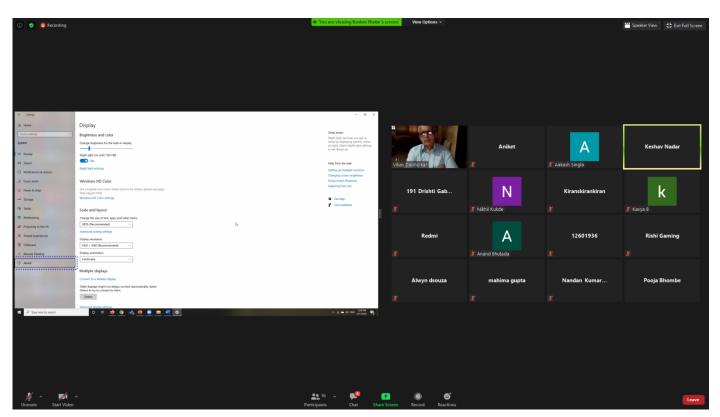


Screenshots of an online basic computer training programme



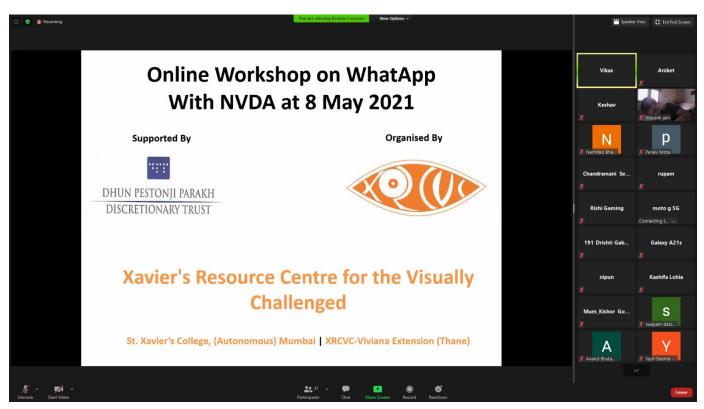


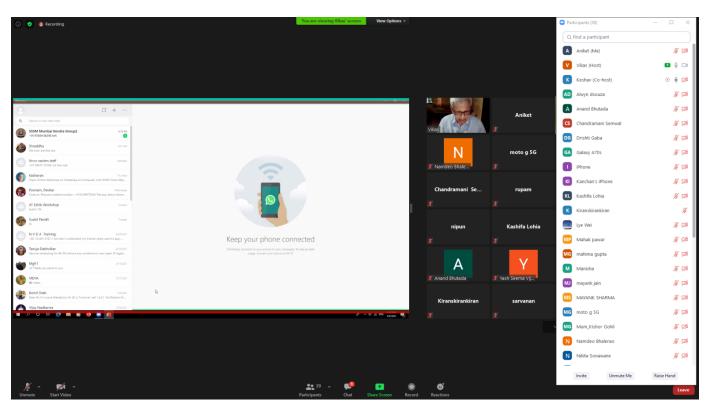
Screenshot of an online training programme on using Robo Braille on computer using NVDA



Screenshot of an online training programme on free utility to compress files and folders with NVDA

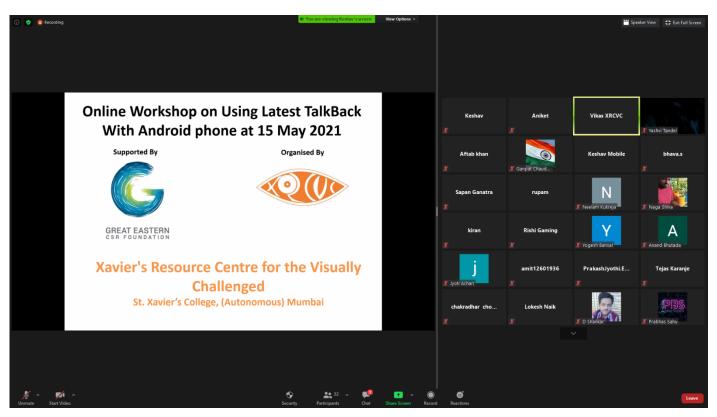


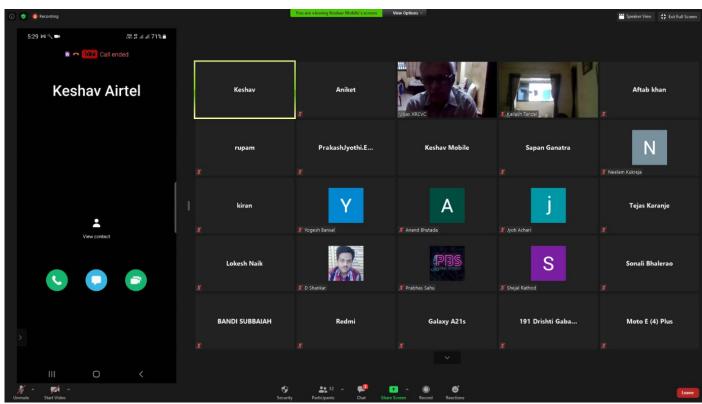




Screenshot of an online training programme on WhatsApp web with NVDA on a computer in which our supporter has also been acknowledged for the training







Screenshot of an online training programme on using latest talkback with android phone in which our supporter has also been acknowledged for the training



B. Accessibility Solutions and Inclusion Services

Alongside Education Access, the XRCVC's advocacy initiatives work in three main areas to create accessible environments: Print Access, Financial Access, and Independent Living.

Print Access

The access to printed works for the visually challenged depends on its availability in accessible formats and the permissibility of the legal systems to convert material to accessible formats. The XRCVC has been working relentlessly to overcome these challenges.

During the academic year 2020-21, the XRCVC produced **37** accessible books (totaling **4479** pages) and additionally **2013** Word pages of class notes. All accessible titles are uploaded onto a national accessible online library (sugamyapustakalaya.in).

Some of the activities conducted under the Print Access initiative during the year are appended below.

- The centre was actively involved during the year in diverse Daisy Forum of India (DFI) print access activities focused on print-disabled persons. A key achievement during the period was the breakthrough with the World Intellectual Property Organisation (WIPO) on India's compatibility with the Marrakesh Treaty. After a number of interactions, India has been certified as being compliant. This has opened the door to the Accessible Books Consortium (ABC) allowing the cross-border sharing of accessible content. Work is now on in creating systems which will operationalise ABC access from India.
- During the year, Dr. Sam Taraporevala regularly participated in con-calls for various committees of the DFI, including the publisher committee, higher education committee, and periodicals committee.
- Dr. Taraporevala was invited by CDAC as a domain expert for development of accessibility standard for ICT products & services in India as a part of KAI (Knowledge & Resource Centre for Accessibility in ICT) project. This national committee has submitted its report to the competent authority.
- Accessible Book Production Standards training sessions were conducted regularly during the year by the XRCVC for numerous stakeholders.

Technology and Accessibility

The XRCVC works extensively in the areas of disseminating information about access technology to both — persons with disabilities and the society at large. In 2012, we had launched an extremely effective national-level awareness programme under the banner of 'Reading Without Seeing', which takes access technologies to blind and low-vision users across locations, and ignites in its audiences the curiosity and basic knowledge to begin their journey of accessing the printed word independently. The programme equips participants with the basic knowhow of a host of assistive technologies.



Testing and Research

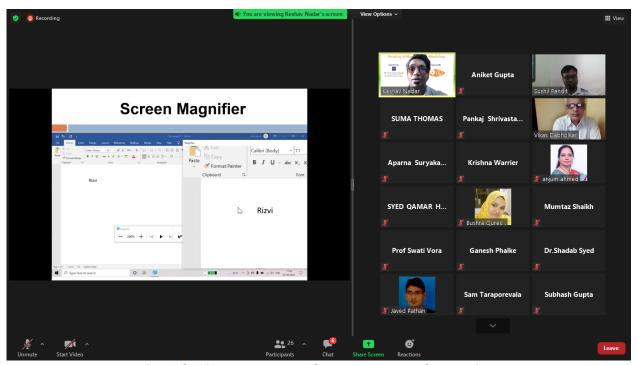
In addition, XRCVC tested the following devices / software for accessibility during the year:

M-Connect Plus Bank of Baroda App, Jio Meet app and website, Evo E10 Daisy Player, Proctortrack Website, Social Media Research, Dreamss App, ColorNote App, Live Transcribe App, Kibo App and Website, Kibo Desk Web and Web, SunoDayKo App, IIT Delhi Website, Sound Amplifier App, Gradeazy Website, ePathshala app and website, 360 Robot App and Hardware, WordToEPUB Addin, Research on Procotoring Software, Ashoka University Form Website, Amazon app, Amazon Assistant app, Amazon website, Alexa, Chetana ARM Online Library Website. The XRCVC is also engaged with the NCR, a leading ATM developer, to make sure that QR code based contactless ATM withdrawal is fully accessible.

Details about the work conducted this year in the areas of technology, accessibility, testing and research are available in Table 2.

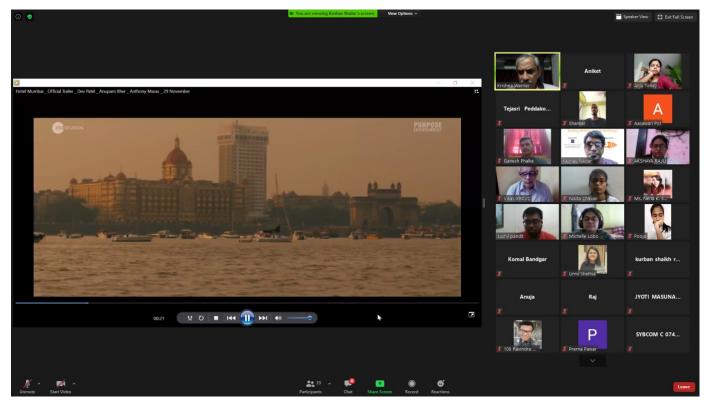
Table 2: Technology and Accessibility (June 2020 – May 2021)

Activity	Details	Participants
2a. Access Technology and Mainstream	26 devices, apps,	
Technologies / Websites / Mobile Apps worked	websites tested	-
with for building accessibility		
2b. Access Technology Awareness workshops for	16 workshops	718
General Audience	•	

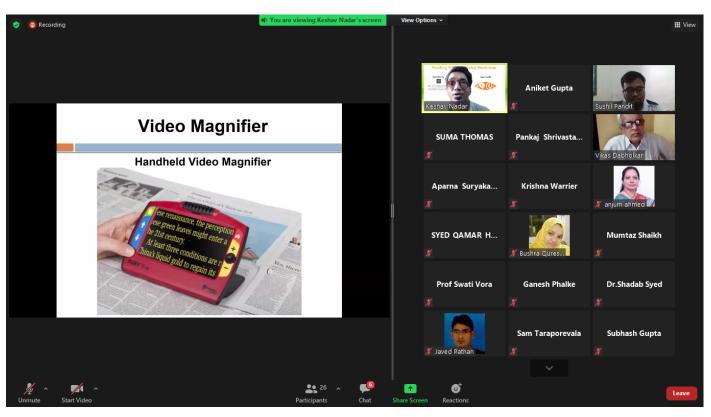


Screenshot of a demonstration of a Screen Magnifier on the computer



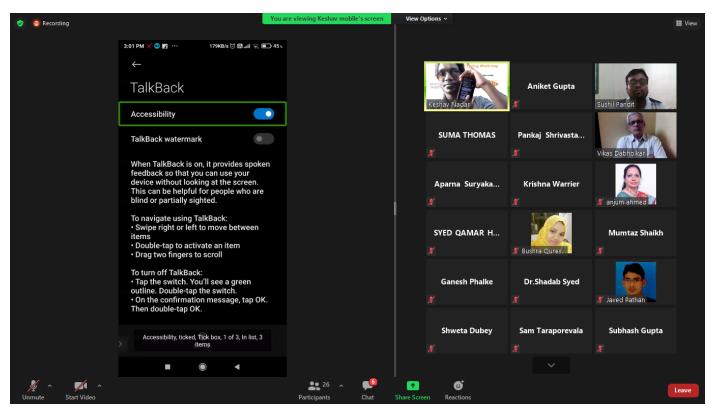


Screenshot of a demonstration of an audio-described movie

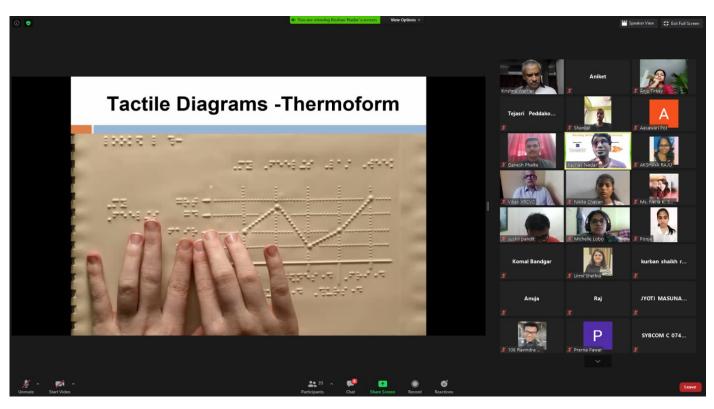


Screenshot of a demonstration of a video magnifier — an assistive device for low vision users





Screenshot of a demonstration of a software talkback on android mobile device



Screenshot of a demonstration of a tactile diagram



Financial Access

The ability to independently manage, operate and execute one's financial transactions is key to independent living. Lack of effective guidelines and lack of optimum use of technology in financial instruments has traditionally denied financial access to blind and low vision persons. The XRCVC has been striving to change this reality.

During the year, we worked with a number of App makers to make their Financial Apps accessible. We also continued our close collaboration with the State Bank of India's Centre of Excellence (CoE), providing inputs for its various projects and programmes and participating in the fourth advisory committee meeting of the CoE in January 2021. The Centre of Excellence for PwDs is one of the SBI Foundation's flagship programmes. It was conceptualized with a goal to be a centralized support centre for persons with disabilities. It primarily works on empowering PwDs through skill enhancement to make significant and measurable improvement that enables individuals to enjoy a more productive and satisfying life by optimizing their cognitive, physical, social and vocational functioning. In December 2020, Dr Sam Taraporevala delivered an address to the HR managers and senior leadership of Union Bank of India on 'Disability Can Never Be A Barrier'.

Independent Living

Each of us, as we pass through our day, interact with a range of products, environments and services from transport services, to kitchen appliances, and entertainment products. How accessible are these daily living services and products for persons with disabilities? The XRCVC's Independent Living initiative questions and works towards rectifying shortcomings in these areas. Some of the activities covered under this initiative during the year are appended below:

- The XRCVC collaborated closely with the National Association for the Blind (NAB) Delhi during the year to implement a special Uber CSR project offering safe Uber rides during the pandemic without charge to blind passengers. The XRCVC facilitated 1000 free rides to blind passengers within Mumbai during the month of December 2020.
- Dr. Sam Taraporevala and Neha Trivedi have been included by Foundation for Innovation and Social Entrepreneurship (FISE) to help identify start-ups in the accessibility domain who have potential to positively impact the lives of the visually challenged. In the period under review, a few organizations were screened and shortlisted.
- In December 2020. Neha Trivedi participated in a panel discussion on 'Support Structure for PwDs' during Inclusion Huddle 2.0 organised by Youth4Jobs Foundation.
- During the year, we continued our ongoing research and development work on visual / auditory / tactile teaching-learning aids and other independent living aids. We worked on integrating diverse technologies which could create a composite system to read through fingers, see through eyes, or hear through ears. The research also has immense potential for the teaching-learning process as it can promote paired reading and can assist a non-Braille literate person to function effectively.



C. Awareness

Creating awareness about the lives and capabilities of visually impaired persons and those with other disabilities is one of the key areas that will open doors for them in a world where the rules are made for and by persons without disabilities.

The XRCVC has been working on a number of such initiatives. For instance, in June 2020, Dr Sam Taraporevala delivered an address titled 'Now and Next: Enabling Inclusion and Accessibility for students with Disability in Higher Education' at a webinar organised by Dr. Ramesh Gaur, Jiwaji University, Gwalior. In July 2020, Dr Taraporevala and Krishna Warrier conducted a webinar titled 'Best Practices in Awareness and Advocacy Programmes for the Visually Impaired' organised by VisionAid. In February 2021, Dr Taraporevala moderated a panel discussion during a workshop on 'Employing Persons with Vision Impairment' organised by Dr Reddy's Foundation (ORF) in association with the Skill Council for Persons with Disability (SCPwD).

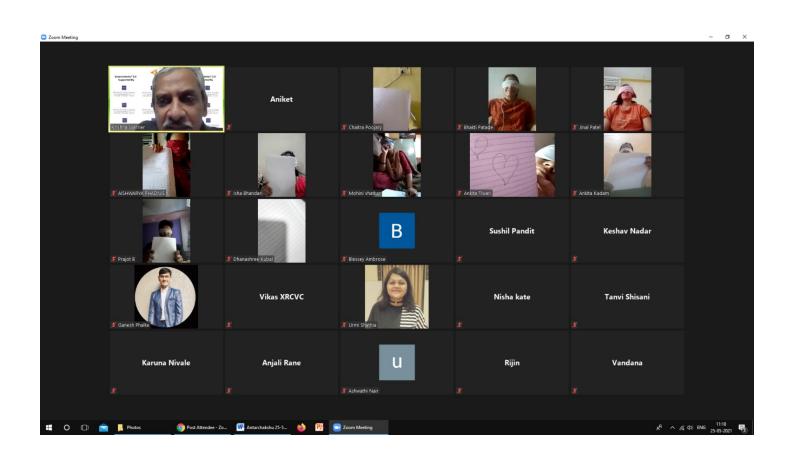
XRCVC's flagship awareness event is called Antarchakshu® — The Eye Within. It is an immersion experience that provides sighted participants an insight into the world of the visually impaired. Antarchakshu® first took root as a mega awareness and sensitization event. In 2018-19, it took on a new avatar — Antarchakshu® 2.0 — which is conducted as a series of bespoke, need-based sensitization and awareness workshops in a marathon run reaching out to larger numbers at the location of participants. This year, with the advent of Covid-19, Antarchakshu® 2.0 took on an online avatar, reaching out to many diverse stakeholders such as college students, corporates, professionals and the public at large.



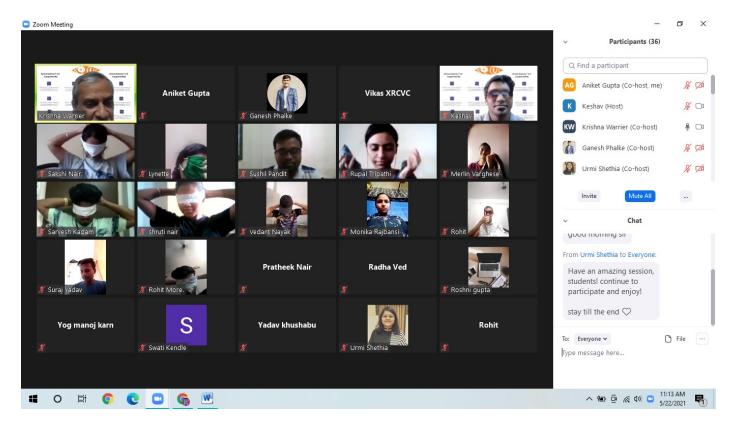


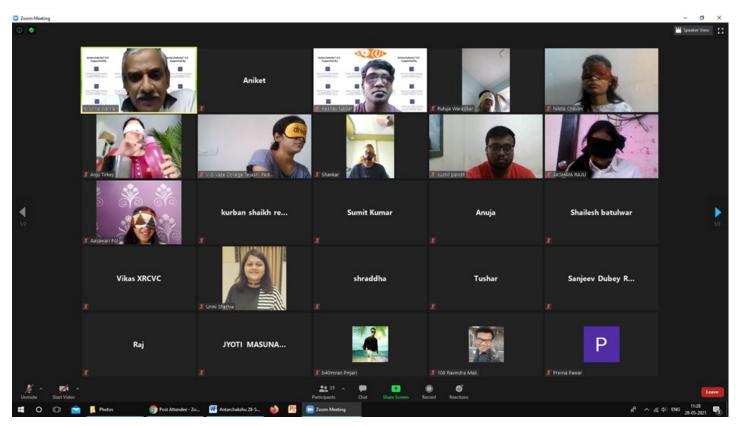












Screenshots of Antarchakshu 2.0



During the year XRCVC also continued to deliver a unique course called 'Diversity Discourse' which had been developed for the Xavier Institute of Communication (XIC) in 2018-19. The objective was to sensitize participants to the many communities that society implicitly and explicitly ignores, and make a case for why it is necessary to bring these communities into mainstream public discourse. The content was imparted mainly through interactive workshops to over 250 students at XIC. This course was also offered to students of St Xavier's College and Sophia College for Women.

Awareness events were conducted for a variety of target groups across the year (see Table 3).

Table 3: Awareness and Sensitization (June 2020 - May 2021)

Activity	Workshops	Participants
3a. Antarchakshu Workshops	96	2994
3b. Antarchakshu Mega Events	-	-
3c. Diversity Discourse Course	10	357

Conclusion

We would like to extend our gratitude to our funders, partners, and sponsors who have played a major role in making us what we are today.

We would like to specially thank Great Eastern CSR Foundation, Dhun Pestonji Parakh Discretionary Trust, Mr. Vikram Utamsingh, Sheth Developers & Realtors (India) Limited, Lila K. Jagtiani Foundation, Rashna T Doongaji, Ms Vabhiz Pestonjamasp, Ms Persis Pestonjamasp, Lions Club of East Bombay, State Bank of India and SBI Foundation, Godrej Industries Ltd, Union Bank of India, SBI Mutual Fund, Tata Sons Ltd, and Bharat Petroleum.

A big thank you to our large pool of volunteers as well. Their commitment ensures that a small organization like the XRCVC is able to make a significant contribution and touch the lives of countless people all over the country. In conclusion, our deep appreciation goes out to St. Xavier's College — the management, staff members and students — for demonstrating to educational institutes all over the country how a centre of learning can be truly inclusive to persons with disabilities. Special thanks to Dr Rajendra Shinde, the principal, whose ongoing support and guidance has helped the XRCVC continue as a centre of excellence of national repute.