



Unlocking Tomorrow's Classrooms

The Role of Interactive Flat Panels in Education



Acer's interactive flat panels bring students and teachers together in the smart and modern classrooms of today, fostering an engaging and innovative learning environment.



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EXECUTIVE SUMMARY

Interactive flat panels or interactive white boards have transformed the educational landscape by offering dynamic and immersive learning experiences. The Indian interactive panel market was valued at USD 177.9 million in 2020 and is expected to reach USD 353.2 million by 2026, with a CAGR of 12.6% from 2021 to 2026.¹ Interactive flat panels empower educators to present content vividly, foster active participation, and facilitate collaborative learning while accommodating diverse learning styles. These state-of-the-art devices seamlessly integrate with modern teaching methods, offering interactive lessons that captivate students' attention.

Despite the numerous advantages of these smart boards for teaching, their adoption has fallen short of expectations. Acer is leading the charge in overcoming this challenge, seamlessly bridging the digital divide with its innovative interactive displays and championing hybrid learning for a brighter future in education.

INTRODUCTION

In this digital age, the concept of learning has transcended the boundaries of traditional classrooms. At the forefront of this transformation are interactive flat panels, modern large-format touchscreens that redefine educational experiences. These vibrant and clear displays serve as digital tools for learning, catering to classrooms of all sizes and types. But interactive flat panels are more than just screens; they are dynamic hubs for education. With features such as digital whiteboards, responsive touchpoints, an extensive resource hub, seamless integration with various operating systems, cloud connectivity, and breathtaking 4K visuals, interactive flat panels offer a world of possibilities. Beyond the classroom, the interactive whiteboards help in teacher training and fostering collaboration in ways previously unimaginable.

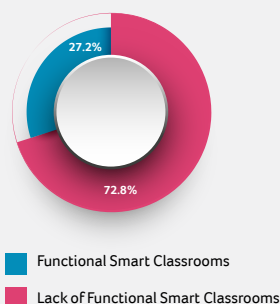
A recent study revealed that schools equipped with interactive technologies witnessed a remarkable 30% improvement in student engagement. Beyond that, interactive flat panels champion inclusivity, ensuring equal learning opportunities for differently-abled and special needs students. They transform traditional learning into interactive experiences, making lessons come alive. As we delve deeper into this whitepaper, we'll explore how interactive flat panels serve as not just whiteboards but as dynamic tools that can achieve much more, enriching education in blended or remote environments. Moreover, with government bodies and institutions increasingly embracing interactive flat panels as part of digital transformations, especially post-COVID, their significance in education cannot be overstated.

UDISEPlus report for 2021-22 points out that India has a vast total of 1,489,115 schools. Among these schools, only 222,155 have operational smart classrooms equipped with digital boards, smart boards, virtual classrooms, or smart TVs, which means 14.9% of schools in India have adopted smart technologies to enrich the teaching and learning process.² According to reports, 14.4% of government schools and 12.8% of government-aided schools have functional smart classrooms, while the percentage is slightly higher for private schools at 18%.³

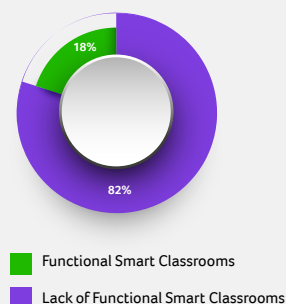


FUNCTIONAL SMART CLASSROOMS

GOVERNMENT AND
GOVERNMENT-AIDED SCHOOLS



PRIVATE SCHOOLS



HOW INTERACTIVE PANELS EMPOWER EDUCATORS

Interactive flat panels are revolutionizing the way teachers educate students, offering a multitude of benefits. Here are some ways they help:

Enhanced Lesson Preparation

Interactive flat panels enable teachers to prepare lessons that seamlessly integrate across platforms and software. They can incorporate various multimedia elements such as videos, simulations, and animations to elucidate complex concepts, making learning more interactive and enjoyable.

Real-time Interactivity

Students actively participate in lessons through these panels, and their interactions can be recorded for later review and sharing. This feature promotes engagement, ensuring that students stay connected and attentive.

Live Content Building

Teachers can build upon the content they've prepared in real-time, tailoring lessons to meet students' specific needs, answering questions, and encouraging class participation.

Efficient File Management

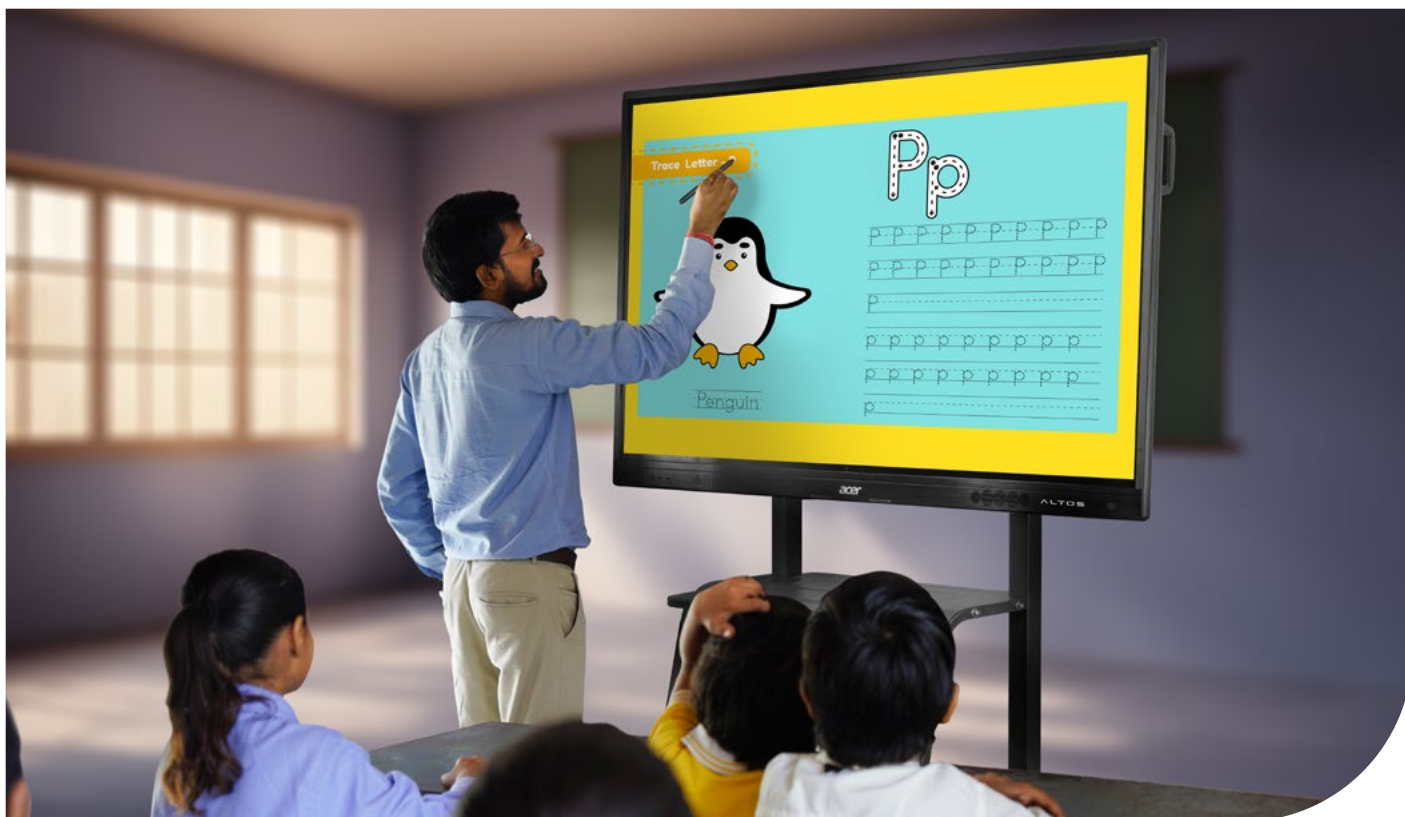
Interactive flat panels are equipped with File Manager Software that streamlines the management of files and folders. Users can access cloud drives, create, rename, copy, move, delete files, and perform other file-related tasks, making it easy to organize and access educational materials.

Collaborative Learning

These panels offer a built-in whiteboard with annotation tools, making it simple for teachers and students to collaborate. They can collectively engage in creative activities, display graphics, share videos, and explore a wide range of media, fostering a collaborative and immersive learning environment.

Overcoming Technical Limitations

Compared to traditional projectors, which have brightness issues in open window environments and limited lifespan, interactive flat panels provide a long-lasting and easy-to-maintain solution.



HOW INTERACTIVE PANELS EMPOWER STUDENTS

Interactive flat panels offer several advantages for students, enhancing their learning experiences in numerous ways. Here's how these innovative tools benefit students:

Improved Learning

In collaboration with several IT and education thought leaders and researchers, SMART Technologies conducted research across more than 26 countries. The findings reveal a significant correlation between increased utilization of display technology, group pedagogy, software, and student success. Notably, students' performance, particularly in subjects like Mathematics and English, showed remarkable improvements, with achievements increasing by up to 34%, and an average enhancement of 16%.⁴

Enhanced Collaboration

Interactive flat panels foster collaboration among students and teachers, creating an environment that encourages active and effective learning. Through interactive tools and collaboration software, students can collaborate on projects and assignments, promoting teamwork and shared knowledge.

Increased Productivity

Interactive flat panels streamline administrative tasks, such as grading and record-keeping, freeing up teachers to concentrate on teaching, and enabling students to dedicate more time to learning. This heightened productivity can result in improved student outcomes and a more efficient use of time in the classroom.

Remote Access

Interactive flat panels offer remote access to educational resources, ensuring that students and teachers can continue their learning and teaching beyond the classroom's physical boundaries. This not only increases the accessibility of education but also simplifies students' efforts to stay engaged with their studies, regardless of location.

CHALLENGES

The adoption of interactive flat panels in the education sector comes with a number of challenges.



Lack of Awareness:

Many educators and decision-makers may not be fully aware of the capabilities and benefits of interactive flat panels. They might not know how interactive flat panels can enhance teaching and learning experiences, leading to hesitation in adopting them.



Choosing the Right Technology:

Selecting the appropriate technology for classrooms can be a daunting task. Educators often grapple with decisions regarding the specific features, compatibility, and long-term suitability of interactive flat panels.



Installation:

The implementation of interactive flat panels often requires technical installation, which can be a logistical challenge for educational institutions.



Training:

It's essential for educators to be comfortable with the technology to fully exploit its potential, but many teachers, especially those who are not tech-savvy, struggle to use these devices effectively.



Cost Considerations:

Budget constraints are a significant barrier to adopting interactive flat panels, as these technologies can be initially expensive. Institutions may need to allocate funds for the purchase of interactive flat panels, installation, and ongoing maintenance. The long-term benefits of interactive flat panels may outweigh the initial costs, but the budgetary impact can still be a concern.

SOLUTIONS

Ultra-thin, Robust and Eco-friendly Design

Design is undeniably a paramount factor in interactive flat panels. Their ultra-thin and robust structures are impeccably suited for educational environments. The 65-inch Acer IZ65A and 75-inch Acer IZ75A feature an ultra-thin profile and anti-static metal body, making it an ideal fit for dynamic teaching and learning spaces.

Engineered for robustness and durability, the design accounts for the demanding nature of educational settings where multiple students engage with the devices throughout the day. The durability ensures consistent performance and longevity, further enhancing the value they bring to educational institutions.

Features such as rounded edges and toughened glass with a Mohs Hardness level of 9 are incorporated to prevent any potential injuries, making these smart boards not just technologically advanced, but also user-friendly and safe for all age groups. Overall, the thoughtful design of these interactive flat panels seamlessly blends functionality, safety, and aesthetics, making them a valuable addition to any educational setting. The inclusion of a wall mount standard makes installation more convenient.

The monitors come with a built-in power supply and low power consumption, with standby power usage at or below 0.5W. This effectively promotes conservation and contributes to eco-friendliness. A built-in temperature sensor for real-time monitoring of machine temperature is also one of the features.



Immersive Viewing Experience

In environments like classrooms or meetings where group interactions are common, the importance of high-resolution screens and excellent audio quality is paramount.

The Acer's 65-inch and 75-inch large screens (wide angle viewing) ensure that content is clearly visible from all angles, allowing for an enhanced viewing experience that reaches a larger audience. This significantly improves communication and collaboration, making it an ideal tool for fostering more effective learning environments. The flicker-free monitors come equipped with an A-grade anti-glare IPS panel and a blue light filter. The IPS panel additionally helps reduce eye strain and discomfort, making it an ideal choice for extended daily usage.

Moreover, the Acer screen delivers eye-catching, razor-sharp images thanks to its 4K Ultra HD resolution. This high-resolution display, coupled with LED backlighting, provides vibrant and detailed visuals that can captivate and engage viewers. The screen also boasts a brightness of 400cd/m2, ensuring that the content is always clear and easy to see, even in brightly lit rooms.

The immersive experience is further improved by the 40-watt sound power delivered through dual speakers on both sides. It incorporates cutting-edge 3D digital filtering and 3D digital noise reduction technology, automatically eliminating noise interference, residual image and more.

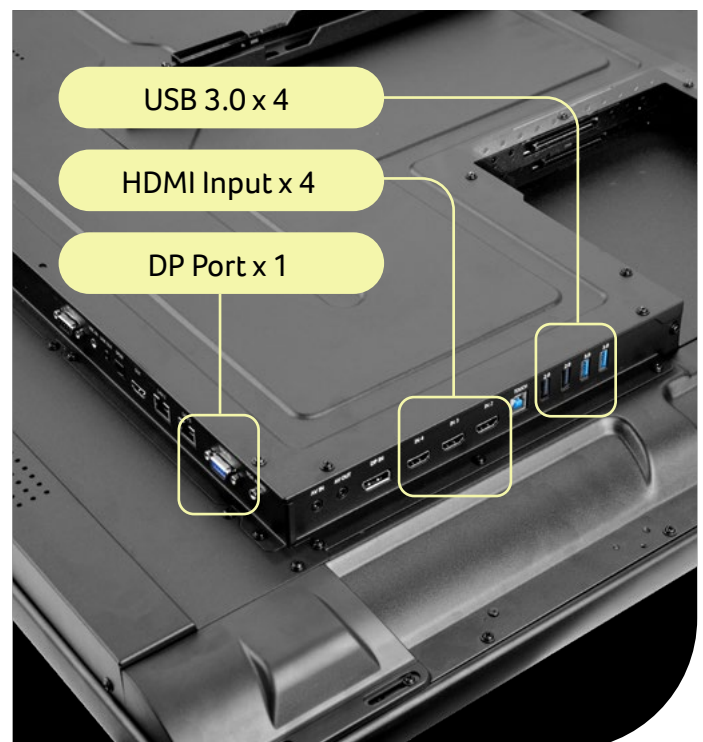


The combination of a large screen, 4K UHD resolution, LED backlighting, and high brightness makes the Acer screen not just a tool, but a game-changer in educational settings, business meetings, and anywhere else where clear, high-quality visuals are essential.

Versatile Connectivity Options

To meet the demand for flexible and interactive learning experiences, versatile connectivity lays the foundation for a collaborative and innovative educational environment. A range of versatile options enables the seamless integration of various devices and applications, empowering educators to effectively adapt and engage students. Acer IZ65A and IZ75A offer a range of connectivity options, such as HDMI, DP Port, Bluetooth 5.2, and Wi-Fi 6.

This versatility in connectivity enhances engagement and attention in the education sector. These adaptable connectivity choices guarantee that interactive displays can tailor themselves to the requirements of diverse users and environments, rendering them an indispensable tool in today's digital era.



Easy to Set Up and Training Support

Ensuring the successful integration of interactive displays into educational environments goes beyond just providing the necessary equipment. It warrants a comprehensive and accessible training program for educators, even those who might not consider themselves technologically adept. Acer recognizes this need and provides skilled technicians to facilitate smooth and efficient setup processes. But it doesn't stop there. Acer also conducts robust training sessions designed to equip teachers with the knowledge and confidence they need to fully exploit the capabilities of these innovative tools. The ultimate aim is to enhance classroom learning experiences for all students, enriching their education in a digital age.

Intuitive and Feature-packed for Collaboration

Interactive displays' software and navigation capabilities play a pivotal role in their effectiveness as educational and collaborative tools. Acer, recognizing the importance of seamless user experiences, offers devices running on Android 13, which provides a user-friendly interface and access to online resources. With a variety of themes like campus-style and smooth navigation features, users can easily access the tools they need for interactive learning and collaborative work. The inclusion of three styluses enhances the interactive experience, offering two magnetic styluses and one extender stylus for increased versatility and effectiveness. In addition, it offers centralized control capabilities with remote power toggling, scheduling power management, channel forced switching, application locking control, online ATA/FOTA updates and various other functions. It also supports remote device management features such as monitoring, remote access for easy connectivity, remote control for device management, remote wipe for data security and remote lock for added protection are provided. Acer's interactive displays support up to 20 touchpoints, ensuring multiple users can engage simultaneously. It is powered by an A55 Quadcore processor and 4GB RAM, along with 32GB of storage space and an additional optional internal storage of 128GB through a micro SD card. Furthermore, it encompasses E-share screen functionalities, allowing seamless projection of images, documents, audio and video, accommodates up to 9 split-screen displays and effortless switching between large and small screens. It provides support for Windows, macOS, iOS and Android systems.

Acer's E-share screen capabilities provide the ease of wirelessly projecting images, documents, audio, and video, accommodating up to nine devices across a range of operating systems, such as Windows, macOS, iOS, Linux, Chrome, and Android.

Moreover, Acer's commitment to enhancing collaboration is evident in its software offerings. Features such as application split, enabling the use of multiple apps side by side, and one-click annotation for real-time interaction on content, empower educators and professionals to make the most of their presentations and teaching materials. With the added advantage of 4K projection capabilities, Acer ensures that collaboration is not just easy but also visually impressive. Acer's comprehensive software and navigation options transform interactive displays into powerful tools for learning and working together effectively.

INITIATIVES FOR DIGITAL CLASSROOMS

Revolutionizing Schools with Interactive Panels

Interactive panels are ushering in a transformative era in education for government as well as private schools in India. These innovative tools are revolutionizing traditional teaching methods by fostering immersive, engaging, and collaborative learning experiences. By investing in interactive panels, schools are equipped with cutting-edge technology that not only captures students' attention but also enhances comprehension and retention of educational content. Moreover, these panels encourage active participation, adaptability to diverse

learning styles, and the incorporation of multimedia resources, ultimately preparing students for the demands of the digital age. As the Indian education sector continues to champion the integration of interactive panels in schools, they pave the way for a more dynamic and effective educational landscape that empowers both educators and students to thrive in an increasingly interconnected and technology-driven landscape.

Acer spearheaded a classroom digitization program

Acer has taken the lead in driving digital transformation in the education sector, collaborating with a state government in North East India. Through this partnership, Acer has successfully implemented one lakh interactive flat panels across schools, bringing cutting-edge technology into classrooms and enhancing the learning experience for students in Assam. This initiative underscores Acer's commitment to advancing education through innovative solutions.

Acer supported a large-scale education initiative

Acer has played a pivotal role in supporting an education project for a state government by introducing smart and technology-enhanced classrooms. This involved the seamless implementation of interactive flat panels, revolutionizing the learning environment and contributing to the advancement of education in the region. Acer's involvement underscores its dedication to empowering education through innovative solutions.

THE WAY FORWARD

The future of interactive displays in the education sector holds promise as these innovative tools continue to evolve. We can anticipate an era characterized by enhanced interactivity, where these displays become even more responsive and intuitive. Personalization will take center stage, with adaptive learning software tailoring educational content to individual student needs. The integration of virtual and augmented reality will open up new dimensions of learning, making complex concepts more accessible. Collaborative opportunities will extend beyond the classroom, enabling students to connect and learn globally. Real-time analytics will empower educators to make data-driven decisions, and sustainability will drive the development of eco-friendly display solutions. Moreover, AI will play a crucial role in enhancing the educational experience. In sum, the future of interactive displays in education promises a dynamic, adaptive, and technologically enriched learning environment that empowers both students and educators.

To know more visit: <https://www.acer.com/in-en/>

Source:

1 - Valuates Report 2 - UDISEPlus Report 3 - EducationForAllinIndia 4 - SMART Technologies

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