

SHAPING INTELLIGENCE
MEET AIOT.
TOUCH THE FUTURE.



Institute of Technical Education

Classroom of the Future

Institute of Technical Education, Singapore

Peh Wee Leng,
Director of School of Electronics & Info-Comm Tech



About Us



Singapore - Institute of Technical Education (ITE)

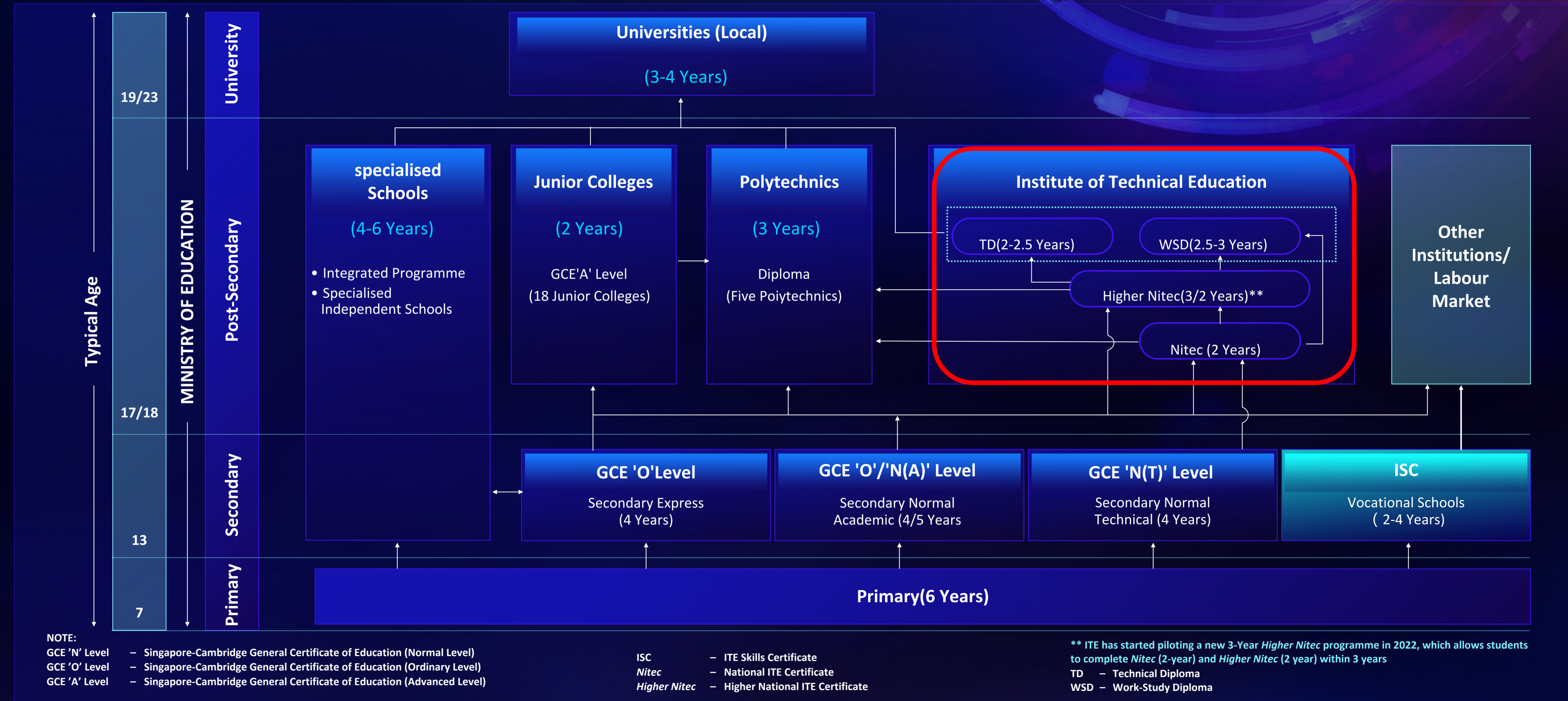
ITE is a **principal provider of career and technical education**, a key developer of **national skills certification and standards**, skilling Singapore for the future economy

It offers three key programmes

- **Pre-Employment Training** for youths after secondary education;
- **Continuing Education and Training** for adult learners; and
- **Industry-Based and Work-Study Programmes** with employers.



About Our Students



'One ITE System, Three Colleges' Governance Model



Legend:
Niche course in each college





Background (2020)

THE STRAITS TIMES

SINGAPORE

Singapore schools to shift to full home-based learning from April 8 to May 4 amid Covid-19 pandemic



The Ministry of Education will work with schools to implement the shift to full home-based learning. ST PHOTO: GIN TAY



Rei Kurohi
Tech Correspondent

UPDATED APR 14, 2020, 12:49 PM SGT



SINGAPORE - Students in all schools and institutes of higher learning will shift to full home-based learning from next Wednesday (April 8), Prime Minister Lee Hsien Loong said on Friday.

The Ministry of Education (MOE) will work with schools to implement this, Mr Lee said in a speech announcing new measures to curtail the spread of Covid-19.

The measures will last at least until May 4.

THE STRAITS TIMES

Covid-19 pandemic spurs rise in online learning among Singaporeans



Asian Insider

School, interrupted: How Covid-19 has affected students around the world

Millions of children around the world have had their education disrupted as the Covid-19 pandemic shuttered schools and kept them home. The Straits Times' correspondents in India, Philippines, Malaysia and Indonesia report on how students there have fared and when their studies can get back on track.

FULL HOME-BASED LEARNING



Motivation – After Implementing Home-Based Learning (HBL)

Typical Student's Screen during HBL

The screenshot shows a Zoom meeting window titled "Re: Briefing on 6th Sense Competition". The meeting duration is 37:18. The interface includes a "Request control" button, a "Leave" button, and a list of participants. The main content is a presentation slide titled "Encoder APPLICATION EXAMPLE - WIND POWER SYSTEMS". The slide features a diagram of a wind turbine's internal components, including the pitch system, blades, rotor, low-speed shaft, gear box, controller, anemometer, yaw drive, yaw motor, tower, generator, and high-speed shaft. A 3D cutaway model of the turbine nacelle is also shown, highlighting the "Renewable Energy" components. The participant list on the right includes names like HOW JIA JUN WILSON, IGNATIUS KANG ZHANG XUE, and others.

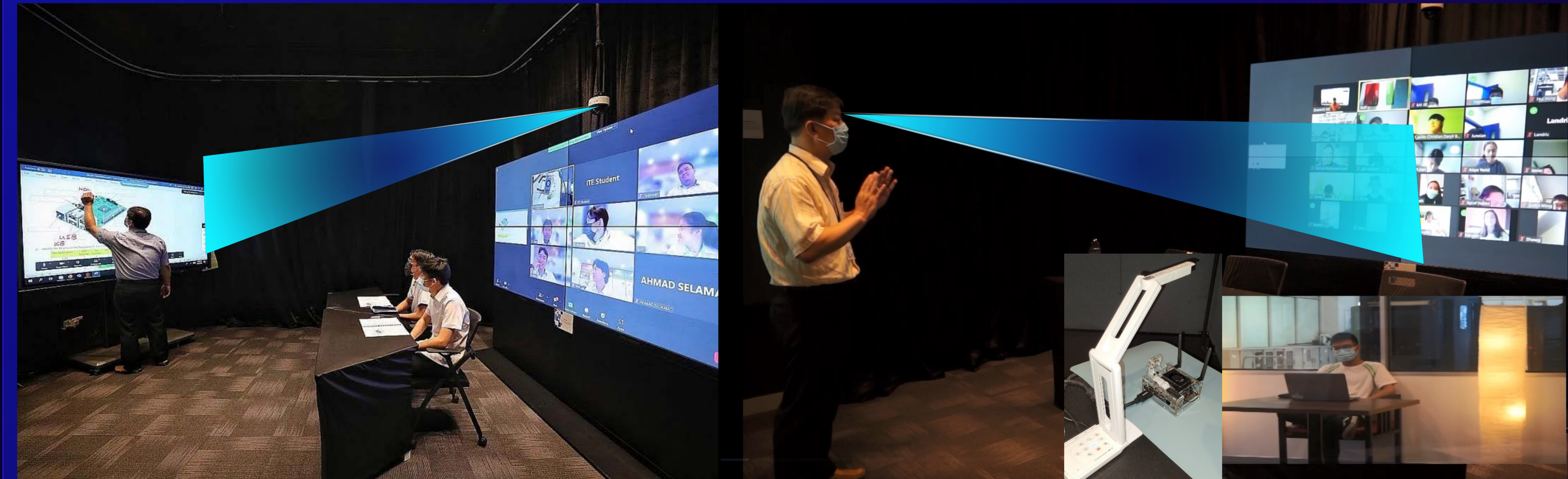
Issues Encountered

- One-way Channel
- Loss of Eye Contact
- Difficult to Elaborate
- Interaction Level **LOW**
- Engagement Level **LOW**

Classroom of the Future 1.0 – Hybrid Learning

BENEFITS

- Students' Facial Expression
- Teacher's Body Language
- Keep Students Engaged
- Promotes Interaction
- Human Touch over Distance
- Convenient to Elaborate
- Flexibility
- Enhanced Time Management
- Motion Tracking



Classroom of the Future 2.0

DIGITAL SIGNAGE

- Biometric Authentication
- Information Dissemination
- AI Attendance Taking



Classroom of the Future 2.0

BENEFITS

- Attendance Taking
- Hybrid and Online Learning
- Motion Tracking
- Interactivity
- Storage and Archive
- Learning-on-the-go.

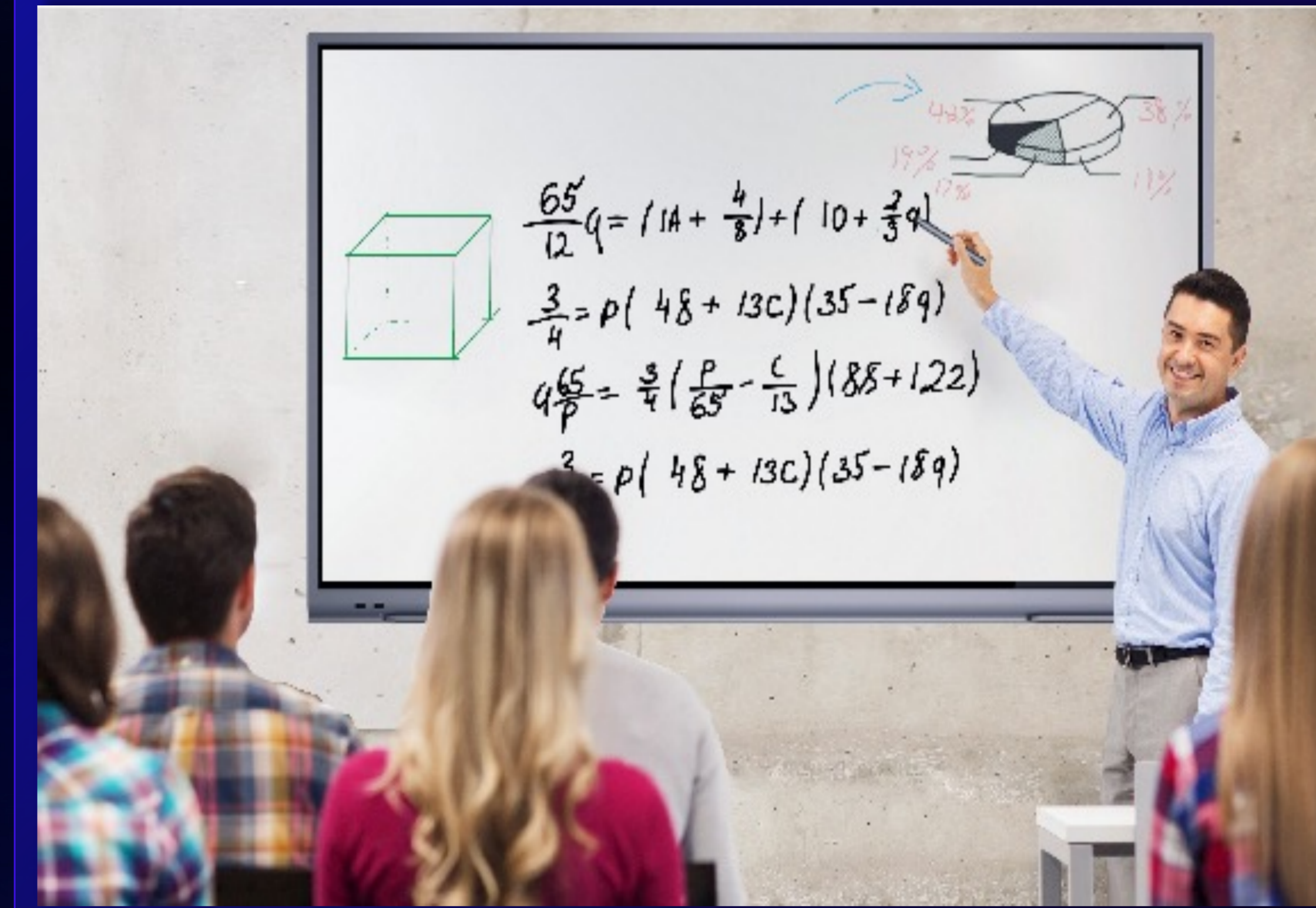
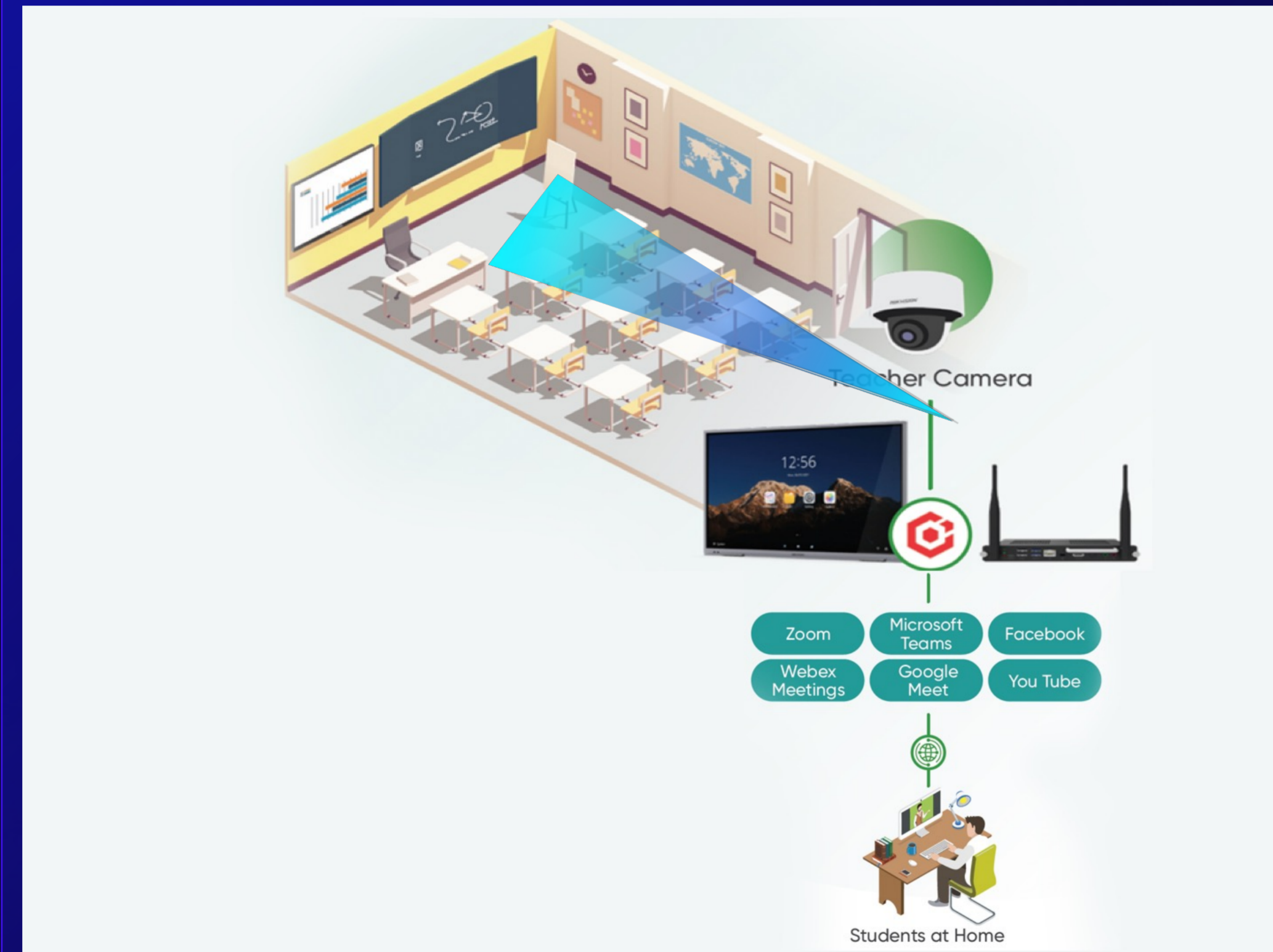


Hybrid and Online Learning

Interactivity

Features

- Keep Students Engaged
- Promotes Interaction
- Human Touch over Distance
- Convenient to Elaborate
- Flexibility
- Students' Facial Expression
- Teacher's Body Language
- Enhanced Time Management
- Motion Tracking



BENEFITS

- Built-in Whiteboard
- Wireless Projection
- Flexible Annotation
- Remote Video Conference

Storage and Archive

BENEFITS

- Resources for students' revision
- Resources for absentees



The advertisement features a white dome-shaped camera with the brand name 'ANKVISION' on top, connected by a dotted line to a black rectangular device with a small screen and buttons. To the left of the camera is an orange circle with a white plus sign. Below the device, the text reads 'Education Sharing Device' in bold blue font, followed by 'Optional choice for high-end solution with recording function' in a smaller black font.

Learning-on-the-go

BENEFITS

- Learning-on-the-go
- Mobile Learning



The image shows two female students wearing face masks and glasses, looking at a laptop screen. The student on the right has 'EM' on her white lab coat. A white text box at the bottom of the image contains the text 'Students can view lessons anytime, anywhere'.

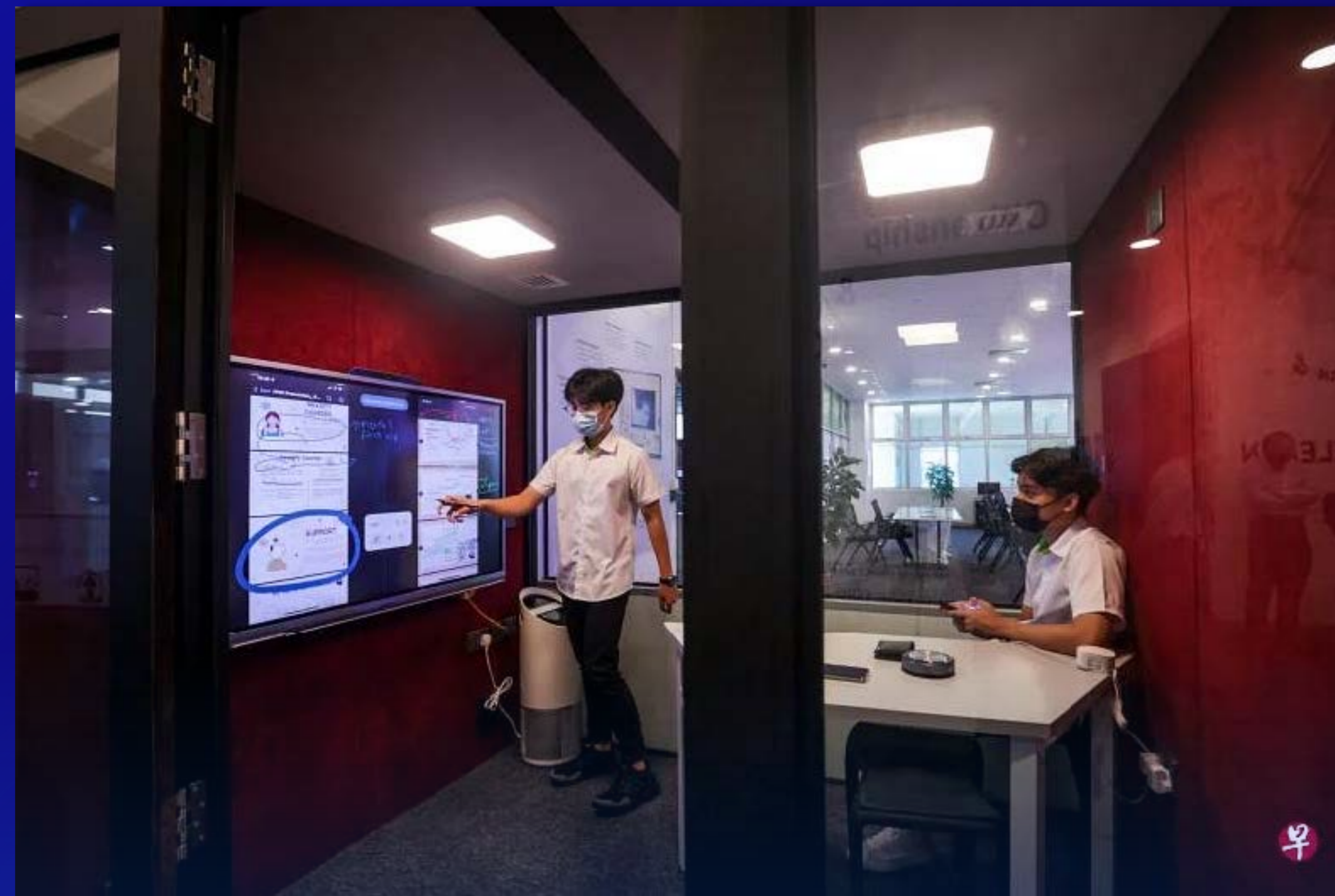
Classroom of the Future 2.0



Classroom of the Future 3.0

BENEFITS

- Collaborative learning
- Interactivity
- Online Discussion
- Hybrid and Online learning



8/30/22, 9:37 PM 工教院与中国科技企业合作 设“未来课堂”培训教员与学生 下载早报APP

新闻 新加坡

工教院与中国科技企业合作 设“未来课堂”培训教员与学生

订户

来源 / 联合早报
文 / 胡温暹
发布 / 2022年8月27日 5:00 AM



工教院东区学院学生在“未来课堂”协作学习区进行讨论，互动屏幕设备方便学生查阅资料做笔记。（叶振忠摄）

字体大小: 小 中 大

方便学生讨论的互动屏幕、录制课堂教学的摄像技术……工艺教育学院借助科技企业的专长打造“未来课堂”，并提升教员和学生的培训。

中国科技企业海康威视新加坡分公司和工艺教育学院星期五（8月26日）签订谅解备忘录。在为期三年的合作中，海康威视将协助工教院发展综合保安系统的高级国家工艺教育学院证书（Higher Nitec）课程，以及持续教育与培训课。此外，它也为工艺教育东区学院打造“未来课堂”，提升数码学习成效，以及在保安系统和视觉智能技术方面为教员提供培训。

中企海康威视 为学生提供实习机会

<https://www.zaobao.com.sg/news/singapore/story/20220827-1306931>

1/7



Attracts Media

Setempat Akses Percuma

ITE kerjasama dengan syarikat teknologi bina 'Bilik Darjah Masa Depan'

Aug 27, 2022 | 05:30 AM



PEMBELAJARAN HYBRID: Dengan adanya teknologi terkini, pelajaran secara hibrid satu secara fizikal dan dalam alam maya dapat dijalankan di 'Bilik Darjah Masa Depan'. - Foto BH KEVIN LIM

INSTITUT Pendidikan Teknikal (ITE) akan bekerjasama dengan Hikvision, pembuat peralatan pengawasan yang merupakan salah satu penyedia penyelesaian Internet Benda (Internet of Things atau IoT) terkemuka di dunia untuk membina 'Bilik Darjah Masa Depan' pertama Singapura.

Menandatangani satu Memorandum Persefahaman (MOU) semalam, kerjasama itu bukan hanya memberi peluang kepada pelajar ITE menjalani latihan amali malah juga peluang pekerjaan masa hadapan.

8/30/22, 9:30 PM ITE College East students take hybrid learning to next level with smart classroom | The Straits Times

THE STRAITS TIMES

ITE College East students take hybrid learning to next level with smart classroom



Lecturers can use a large interactive display to share their teaching slides with students tuning in from home. ST PHOTO KEVIN LIM

Nisha Rahim

PUBLISHED AUG 26, 2022, 5:22 PM SGT

SINGAPORE - Electronic engineering students at the Institute of Technical Education (ITE) College East can now use a new smart classroom to view videos of lessons and present their work from home, among other things.

The smart classroom comes with a large interactive display that lecturers can use to share their teaching slides with students tuning in from home.

The display is also equipped with features to record lessons that students can view at any time.

The classroom, which was rolled out in February and officially launched on Friday (Aug 26), also comes with a camera that can be used to identify students and monitor their attendance.

<https://www.straitstimes.com/singapore/ite-college-east-students-take-hybrid-learning-to-next-level-with-smart-classroom>

1/5

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工教院与中国科技企业合作 设“未来课堂”培训教员与学生

来自 / 联合早报
文 / 报道组
发布 / 2022年8月27日 5:00 AM



工艺教育东区学院学生在“未来课堂”的自主学习区进行讨论，互动屏幕设备方便学生调取资料做笔记。（叶德志摄）

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中企海康威视 为学生提供实习机会

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1/5





THANK YOU