



JOB'S OF THE FUTURE

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EXECUTIVE SUMMARY



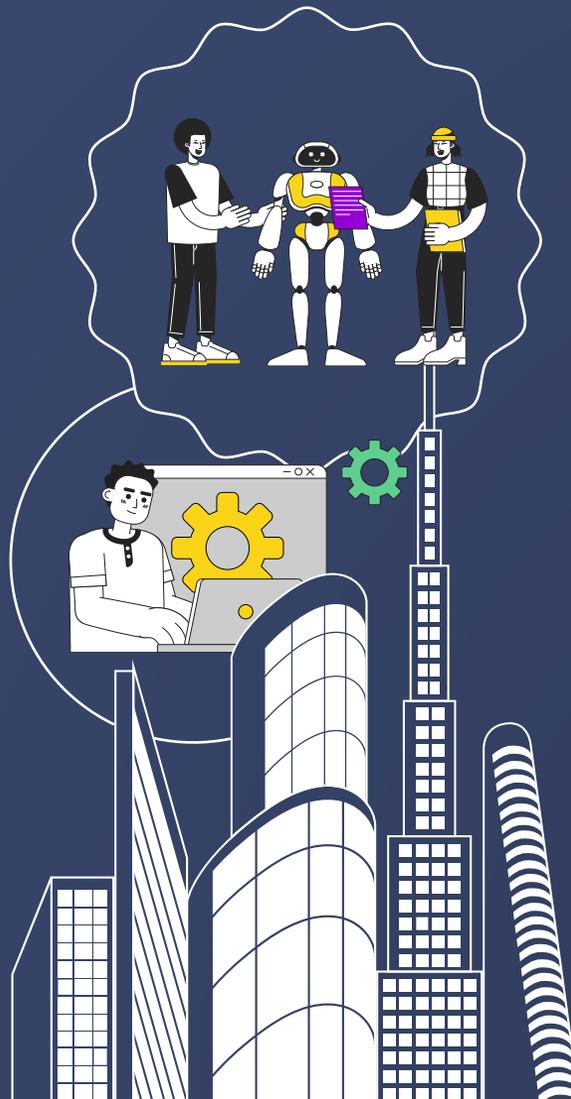
JOB MARKET SHIFTS

The global job market is undergoing rapid shifts driven by technological advancements, automation, and sustainability trends. These changes necessitate a transformation in education systems to equip future generations with the skills needed to thrive in emerging industries



DUBAI'S EDUCATION SYSTEM

Dubai's diverse education system is well-positioned to adapt to these global shifts. With a growing focus on vocational training, STEM education, and interdisciplinary learning, there are significant opportunities to prepare students for future roles, particularly in the green economy and digital sectors



AI, ROBOTICS, GREEN ENERGY

As industries evolve, new roles in AI, robotics, green energy, and data analytics are emerging. These roles demand a blend of technical and soft skills, including problem-solving, emotional intelligence, and adaptability, which are critical for future success



FUTURE-READY LEARNING STRATEGIES

Building the future workforce requires innovative learning methods, including personalized and tech-enabled education. Schools must integrate hands-on experience, digital learning, and interdisciplinary approaches to cultivate a lifelong learning mentality and ensure students are prepared for a rapidly changing job market

THE OBJECTIVE OF THIS REPORT IS TO



RAISE AWARENESS

of future job trends and the critical role of collaboration among education stakeholders to ensure Dubai's workforce is equipped for emerging industries



ENCOURAGE CHANGES

Within Dubai's education system to proactively address future workforce needs. This includes advocating for policy reforms, curriculum alignment with industry demands, and embedding career counselling and interdisciplinary learning to build a resilient, adaptable workforce for the future

GLOBAL JOB MARKET
TRANSFORMATION AND
FUTURE INDUSTRIES

01

DUBAI'S EDUCATIONAL
LANDSCAPE – CURRENT
STATE AND FUTURE NEEDS

02

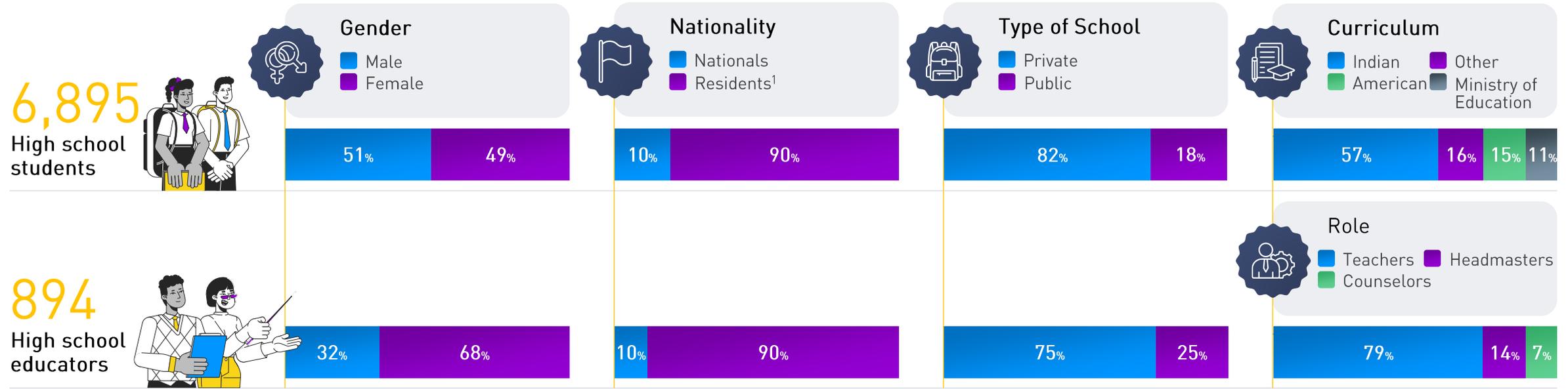
EMERGING JOB ROLES
AND ESSENTIAL SKILLS
FOR SUCCESS

03

BUILDING BRIGHTER FUTURES:
EDUCATIONAL PATHWAYS
AND INNOVATIVE LEARNING

04

AS A KEY INPUT TO THE REPORT, A PROPRIETARY DUBAI FUTURE OF JOBS SURVEY WAS CONDUCTED AMONG ~7,800 STUDENTS AND EDUCATORS TO GATHER INSIGHTS ON FUTURE SKILLS AND THE ROLE OF SCHOOLS



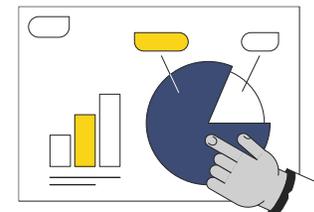
Other key inputs include reports from World Economic Forum, Dubai Future Foundation, and Subject Matter Experts in the education sector

World Economic Forum – Future of Jobs Report (period 2025-2030)

Brings perspective of 1,000 leading global employers - collectively representing more than 14 million workers - across 22 industry clusters and 55 economies from all world regions

Dubai Future Foundation – The Global 50

Key Insights from Subject Matter Experts



¹. Residents from ~100 nationalities (top 5: Indian – 61%; Emirati – 18%; Pakistani – 2%; Jordan – 2%; Egyptian – 2%)
 Note: The Dubai Future of Jobs Survey was conducted in 2023 by DET in collaboration with key education institutions and partners



01.

GLOBAL JOB MARKET
TRANSFORMATION AND
FUTURE INDUSTRIES

CASE FOR CHANGE: UNPRECEDENTED SHIFTS ARE SHAPING THE FUTURE OF LEARNING AND JOBS



TRENDS FOR THE NEXT ~10 YEARS

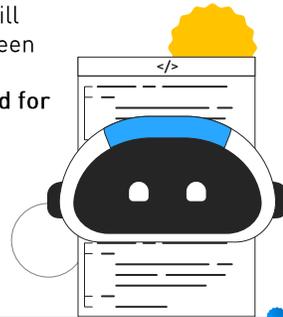
Science of learning and art of pedagogy

With increased emphasis on **individualized learning**, student collaboration and **diverse assessment strategies**, future pedagogy will become **more student-centered**



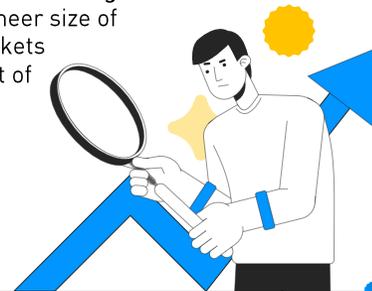
The next frontier

Cutting-edge realms (e.g., **metaverse and space**) will blur the boundaries between the real and virtual, and provide a **new playground for businesses** (certain industries already making the move)



The global centre of gravity is shifting East

Market and population scale, rising incomes, technological advances and sheer size of government pockets will fuel the shift of the economic centre east



Local issues, global responses – Climate change, pandemics and wars

National solidarity and coordinated responses will be tested and strengthened by **global challenges**, and **increased interconnectedness** will invigorate **global mindsets**



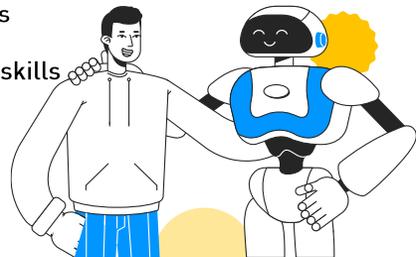
The new face of work

Longer life span, talent migration and the **graduation of Gen Z** into the workforce will introduce new work dynamics geared towards **wellbeing and lifestyle** and will require collaborative and inclusive work styles. Entrepreneurship and intrapreneurship will continue to accelerate



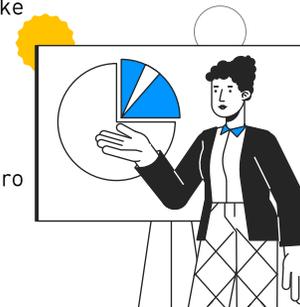
Man and the Machine

AI and automation will become increasingly fundamental to workplaces, accelerating the importance of **social-emotional** and **cognitive skills** along with **technological skills**



Race to Net zero

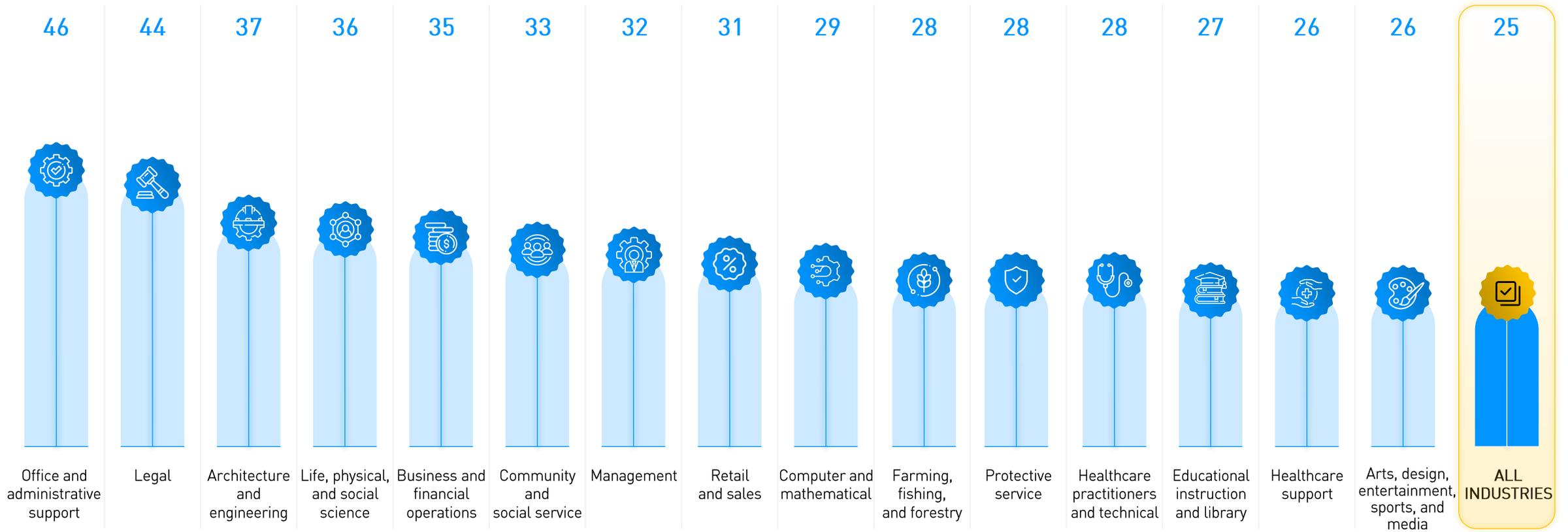
Countries and companies alike will continue to make **pledges for sustainability**, and a **globalized political and technological collaboration** will fuel the race towards net zero



FOR EXAMPLE, RESEARCH SUGGESTS ONE-QUARTER OF CURRENT WORK TASKS COULD BE AUTOMATED BY AI, WITH CERTAIN SECTORS REACHING AUTOMATION LEVELS AS HIGH AS 50%



SHARE OF INDUSTRY EMPLOYMENT EXPOSED TO AUTOMATION BY AI –
NON-EXHAUSTIVE LIST OF ABOVE-AVERAGE INDUSTRIES, CATEGORIZED BY SECTOR ACTIVITIES:



Source: Goldman Sachs Global Investment Research, 2022-2023

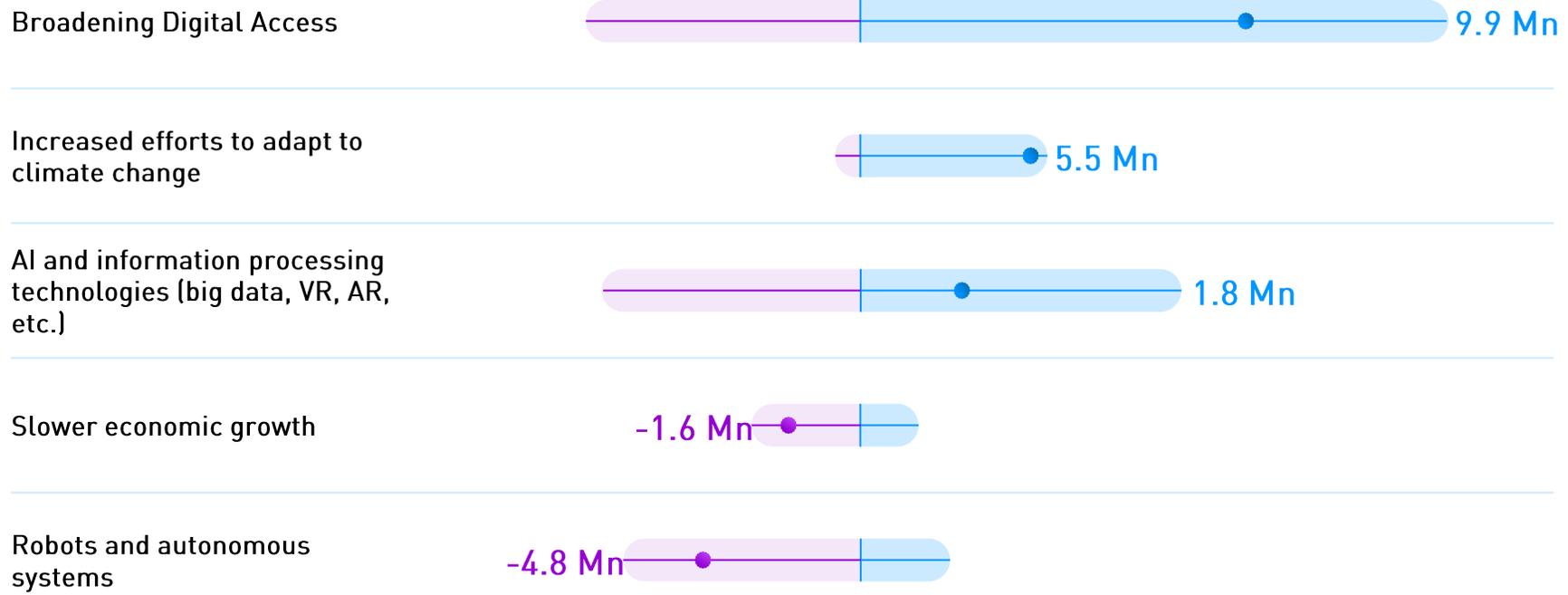
THE WORLD ECONOMIC FORUM REVEALS KEY MACROTRENDS DRIVING EMPLOYMENT GROWTH, WITH TECHNOLOGY TRENDS BOTH CREATING AND DISPLACING MOST JOBS

Non-exhaustive

Macrotrends driving business transformation¹ (Global)

Expected impact of macrotrends on jobs², 2025–2030 (Global)

Main considerations



Technology is predicted to be the most divergent driver of labor-market change, as they are expected to both create and displace more jobs than other macrotrends

Broadening digital access will create the most jobs (19 million jobs created), however businesses believe that this trend will also displace the most jobs (9 million jobs displaced)

Businesses predict that increased efforts to adapt to climate change will displace less jobs than other macrotrends, realizing a 5.5 million net job creation effect

In addition, businesses also predict the strongest net job-displacement effect to be driven by slower global economic growth and robots and autonomous systems

■ Job Displacer
 ■ Job Creator
 ● Net Effect

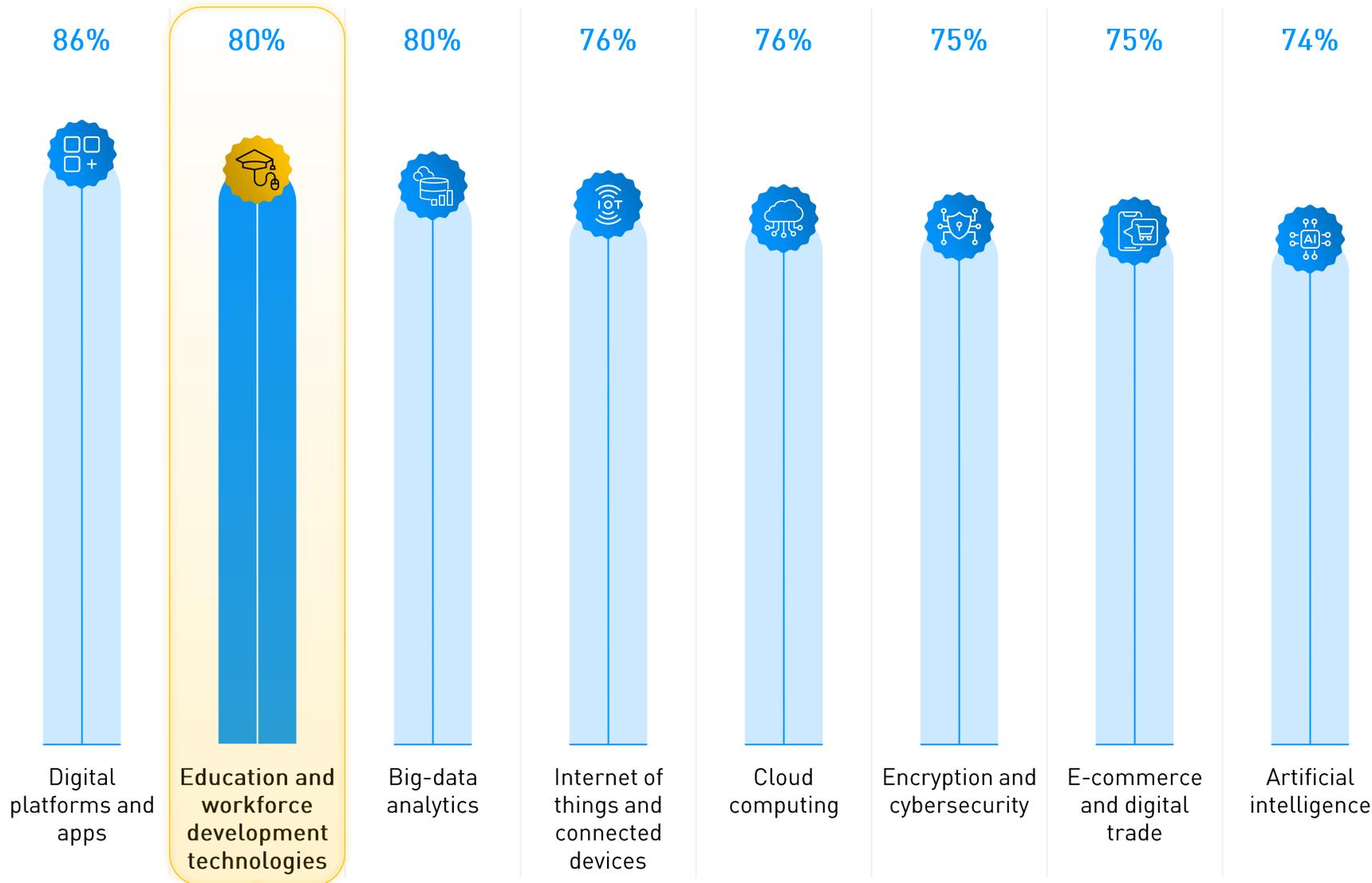
1. Trend that was identified as likely to drive transformation in surveyed organization
 2. Share of organizations surveyed that expect each trend to create or displace jobs, ordered by job creation net effect
 Source: World Economic Forum, Future of Jobs Report 2025

AT LEAST 75% OF SURVEYED BUSINESSES ARE LOOKING TO ADOPT DIFFERENT TECHNOLOGIES BY 2027...



TECHNOLOGY ADOPTION

Adopted technologies over the next 5 years by at least 75% of surveyed organizations



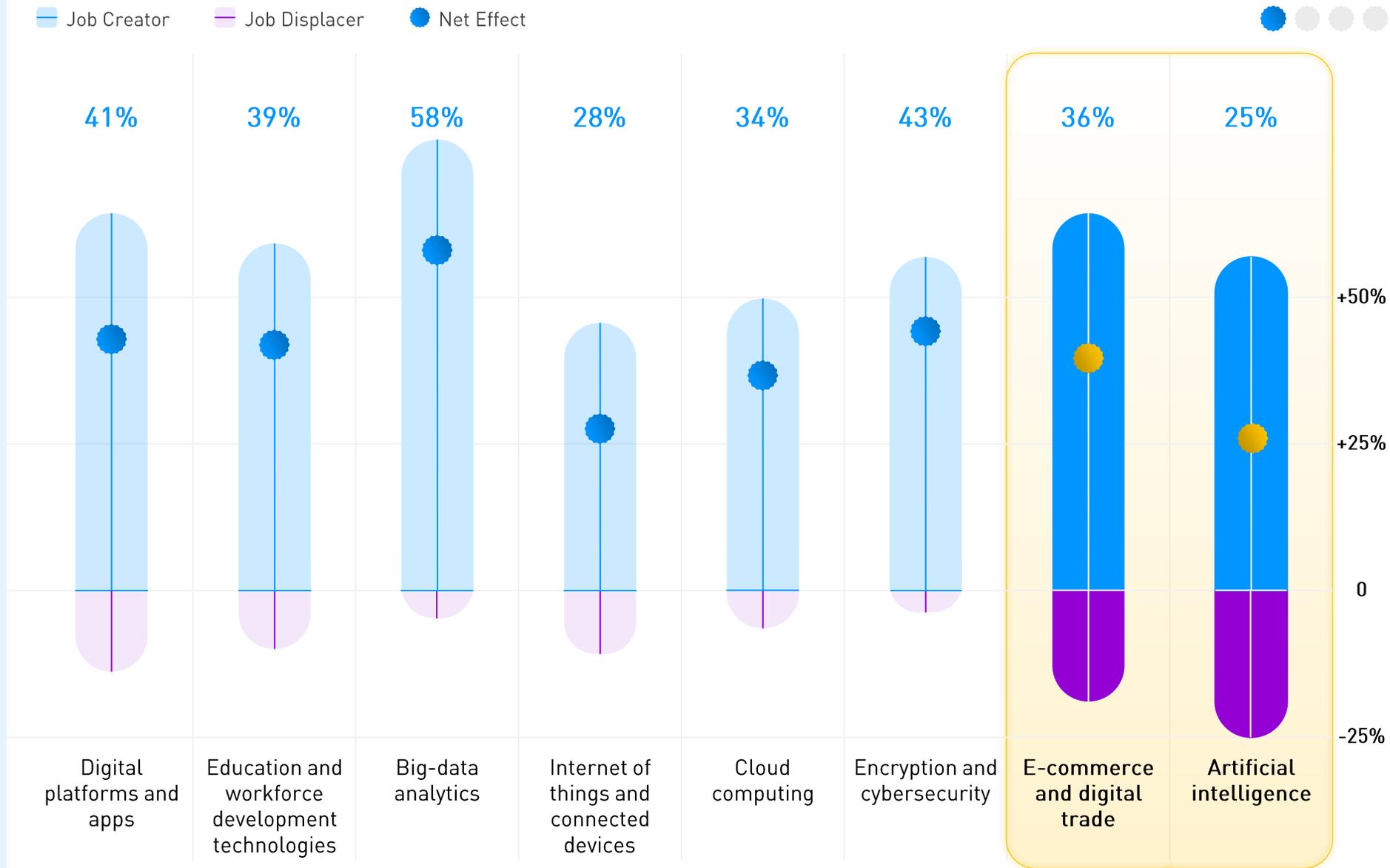
Education and workforce development technologies is expected to be the **second highest adopted technology**, inferring the **importance of technology in advancing the education sector** (e.g., self-paced learning, augmented technologies, virtual learning experience, digitized student progress, etc.)

...WHICH ARE EXPECTED TO BE NET JOB CREATORS



EXPECTED IMPACT OF TECHNOLOGY ADOPTION ON JOBS

Share of organizations surveyed that expect each technology to create or displace jobs



AI and e-commerce and digital trade are expected to result in significant labor market disruption, with substantial proportions of companies forecasting job displacement in their organizations, offset by job growth in other businesses to result in a net positive job creation

GLOBAL RESEARCH INDICATES THAT EMERGING INDUSTRIES OF THE FUTURE WILL DRIVE DEMAND FOR INNOVATIVE DISRUPTIONS AND ADVANCED TECHNOLOGICAL BREAKTHROUGHS ACROSS FIELDS

01 HEALTH

HEALTH 4.0

Leverage **technology** (Medical devices, big data, AI/ML, Electronic Health Records, telemedicine etc.) with minimal human intervention

GENETIC ENGINEERING

Use **technology** to develop vaccines, precision medicines, and treat specific diseases **via gene therapy, biosensors, etc.**

3D BIOPRINTING

Develop **biological structures** including 3D printing skin, bones, implants, prosthetics and some tissues

02 REAL ESTATE

PROPTech

Technology-driven innovations and solutions including acquiring, owning, managing, renting and selling various types of properties

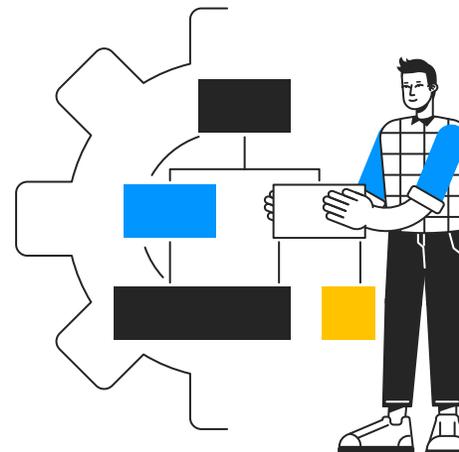
CONSTRUCTIONTECH

Cutting-edge technologies are **reshaping the approach** to designing, planning, constructing, and renovating residential, commercial, and industrial buildings, as well as infrastructure

03 CLEAN ENERGY (NET ZERO)

CLEANTECH

IndustrialTech and business model use cases towards developing new age clean energy solutions



04 PAYMENTS

CROSS-BORDER PAYMENTS

Rapid transformation through technology and innovation with advancements in **seamless payments** (e.g., IoT, APIs) and **alternative payment mechanisms** like blockchain and digital currencies

DOMESTIC PAYMENTS

Enhanced **risk and fraud detection** (through AI, tokenization, and biometric authentication) and advancements in **seamless payments** (e.g., digital wallets, instant payment systems)

05 TRADE AND MOBILITY

TRADE FINANCE

Various products and services to **finance trade transactions/working capital** that help facilitate and mitigate trade risks

NEXT-GEN TRANSPORT

New and emerging mobility options across all modes (land, air, water) used to move people or goods (e.g., Robo-taxis, hyperloops)

SMART LOGISTICS

Smart, **digitally-driven logistics solutions** (e.g., smart port solutions, blockchain managed supply chain, autonomous ships)

ALL THESE DISRUPTIONS ARE SET TO TRANSFORM THE GLOBAL JOB MARKET WITHIN THE NEXT THREE YEARS, WHERE TRADITIONAL ROLES AND GROWTH ROLES REQUIRE A DIFFERENT SET OF SKILLS



JOBS WITH INCREASING DEMAND



AI/ML specialists



Sustainability specialists



Autonomous and EV Specialists



Data analysts and scientists



Robotics engineers



Information security analysts



Fintech engineers



Big data specialists



Digital transformation specialists

MAINTAINED CORE/TRADITIONAL JOBS

While core/traditional jobs will be maintained, they rely on accumulated skills and require upskilling programs based on industry demand



Teachers



Nurses



Lawyers



Skilled Technicians



Mental health professionals



Doctors



Traditional engineers



Pharmacists



Security personnel

JOBS WITH DECREASING DEMAND



Bank tellers and related clerks



Postal service clerks



Admin and executive secretaries



Cashiers and ticket clerks



Telemarketers



Data entry clerks



Material-recording/stock-keeping clerks



Legal officials



Accounting, bookkeeping, and payroll clerks

THERE IS AN OPPORTUNITY TO PRIORITIZE UPSKILLING/RESKILLING STRATEGIES AND ALIGN WITH JOB MARKET NEEDS, REQUIRING IMMEDIATE CHANGES IN THE EDUCATION SECTOR



THE QUICK PACE OF TECHNOLOGICAL ADVANCEMENTS ARE IMPACTING CURRENT SKILLSETS



200 – 350
Million people

Are estimated to require upskilling/reskilling in the next 5 years



15 to 6
Years

The average skill shelf life is projected to shrink from 15 years to just 6 years, underscoring the increasing need for continuous learning and agility in adapting to evolving industry demands



ADAPTABILITY AND HIGHER FREQUENCIES OF RESKILLING IS REQUIRED TO MATCH PACE WITH NEW JOB MARKET NEEDS



LIFELONG LEARNING

Adapting a lifelong learning mentality is essential for keeping up with emerging trends



EMERGING SKILLSETS

Taking the opportunity to proactively prepare students with emerging skillsets will not only help students be ready to enter the job market with relevant skills but also ensure they are well-prepared to adapt with the job market as it changes



02.

DUBAI'S EDUCATIONAL
LANDSCAPE – CURRENT STATE
AND FUTURE NEEDS

DUBAI OFFERS A DIVERSE AND HIGH-QUALITY EDUCATION SYSTEM THAT MEETS THE NEEDS OF A GLOBAL COMMUNITY AND SUPPORTS PATHWAYS TO FUTURE SUCCESS



SNAPSHOT OF DUBAI'S EDUCATION SECTOR

Source: Knowledge and Human Development Authority (KHDA) reports and publications



K-12 EDUCATION SYSTEM

60K

Nationals

370K

Residents

71

Public Schools

226

Private Schools



Dubai's schools compete well vs. OECD and MENA, but are behind well renowned educational institutions



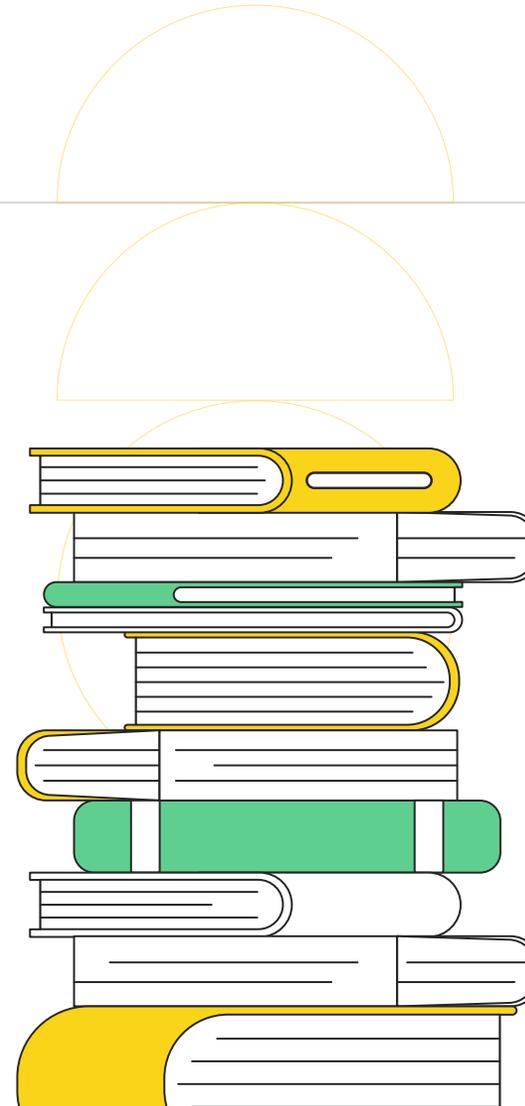
During the pandemic, performance showed only a marginal decline across the three domains of the Programme for International Student Assessment (PISA) in Dubai, faring better than global peers



Diverse system of curricula and price points catering to all segments of the population



Private and public schools are subject to transparent inspection processes driving better outcomes and parent choice



VOCATIONAL EDUCATION PROGRAMS ARE GAINING TRACTION TO MEET MARKET DEMANDS



SNAPSHOT OF DUBAI'S EDUCATION SECTOR



TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET)

More than **800** approved training institutes



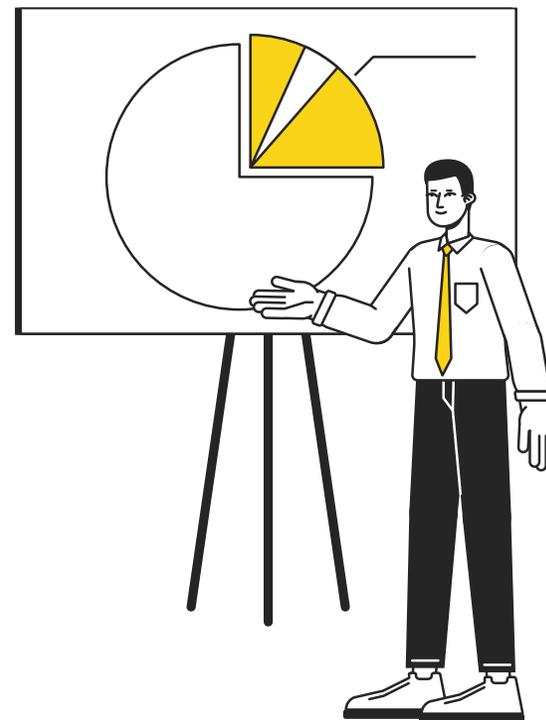
TVET in Dubai plays a crucial role in equipping the workforce with practical skills to support the emirate's economic diversification goals



With a strong focus on industry-relevant skills and hands-on training, TVET in Dubai is evolving rapidly to meet the demands of a knowledge-based, future-focused economy



In recent years, there has been a **steady increase in student enrolment in TVET programs**, with over 60,000 students enrolled in vocational and technical education across the UAE as of 2022, a significant portion of which is concentrated in Dubai



DUBAI'S HIGHER EDUCATION ECOSYSTEM SUPPORTS A GLOBAL COMMUNITY WITH DIVERSE, HIGH-QUALITY PROGRAMS ALIGNED WITH INTERNATIONAL STANDARDS



SNAPSHOT OF DUBAI'S EDUCATION SECTOR



HIGHER EDUCATION¹

18K

Nationals

35K

Residents

30+

Public Universities

30

Private Universities



While Dubai hosts several international branch campuses of globally recognized institutions, the city is aiming to attract **top 200** universities to raise its global education profile



Satellite and branch campuses offer curricula from their main campuses, which may not currently align with the demands of the global workforce market



DUBAI IS A TOP PERFORMER AMONGST ITS REGIONAL PEER GROUP, WHILE STILL HAVING THE OPPORTUNITY TO FURTHER PROGRESS AND MATCH GLOBAL PEERS



COUNTRY



RANKING



MATH SCORE
472 OECD AVERAGE



READING SCORE
476 OECD AVERAGE



SCIENCE SCORE
485 OECD AVERAGE



AVERAGE SCORE
EVOLUTION FROM
2018, POINTS

	COUNTRY	RANKING	MATH SCORE	READING SCORE	SCIENCE SCORE	AVERAGE SCORE EVOLUTION FROM 2018, POINTS
GLOBAL PEER GROUP ¹	Singapore	#1	575	543	561	4 ↑
	Hong Kong	#6	540	500	520	-11 ↓
	Finland	#12	484	490	511	-21 ↓
	Belgium	#21	489	479	491	-14 ↓
	Slovenia	#22	485	469	500	-18 ↓
REGIONAL PEER GROUP ²	Dubai	#24 ³ (CITY)	481	481	486	-1 ↓
	UAE avg.	#46	431	417	432	-7 ↓
	Qatar	#48	414	419	432	9 ↑
	KSA	#64	389	383	390	1 ↑
	Jordan	#75	361	342	375	-57 ↓

1. Higher and lower bound of OECD countries chosen to give direct comparison to UAE, where it ranks above OECD average, chosen due to population size, GDP/capita and comparable PISA ranking

2. Selected for best performing PISA countries in the region

3. If Dubai's score was treated as an independent country ranked compared to countries, it would tie with Germany and exceed scores of the Netherlands and France. Otherwise, UAE ranks #46 Source: OECD PISA results 2022 (Program for International Student Assessment – OECD's global study measuring 15-year-old school pupils' performance on mathematics, science, and reading)

PISA results 2022 – (Age: 15 years old)

↑ Improvement ↑ Slight improvement ↓ Decline

NONETHELESS, DUBAI'S AVERAGE PERFORMANCE IN PRIVATE AND PUBLIC SCHOOLS DROPPED POST-COVID ACROSS ALL DOMAINS

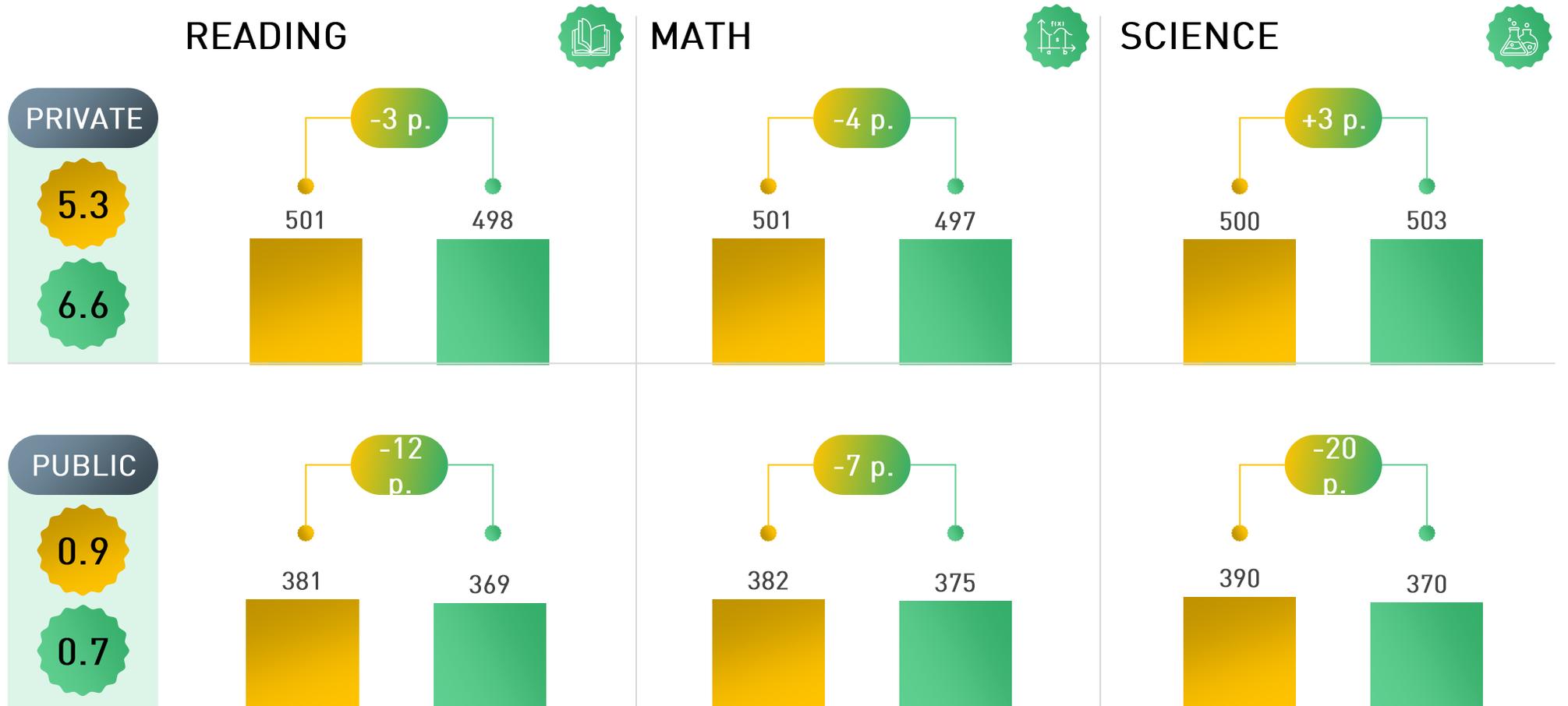


PISA 2018 VS. 2022

Dubai scores for private and public schools



2022 2018 xx xx # of students in sample, '000s



Source: OECD PISA results 2022 (Programme for International Student Assessment – OECD's global study measuring 15-year-old school pupils' performance on mathematics, science, and reading)

SURVEYED STUDENTS CAREER PREFERENCES ARE NOT ALIGNED WITH GLOBAL CAREER FIELDS, WITH FEMALES SHOWING GREAT POTENTIAL TO EXPLORE OPPORTUNITIES BEYOND HEALTH SCIENCES AND CREATIVE ARTS



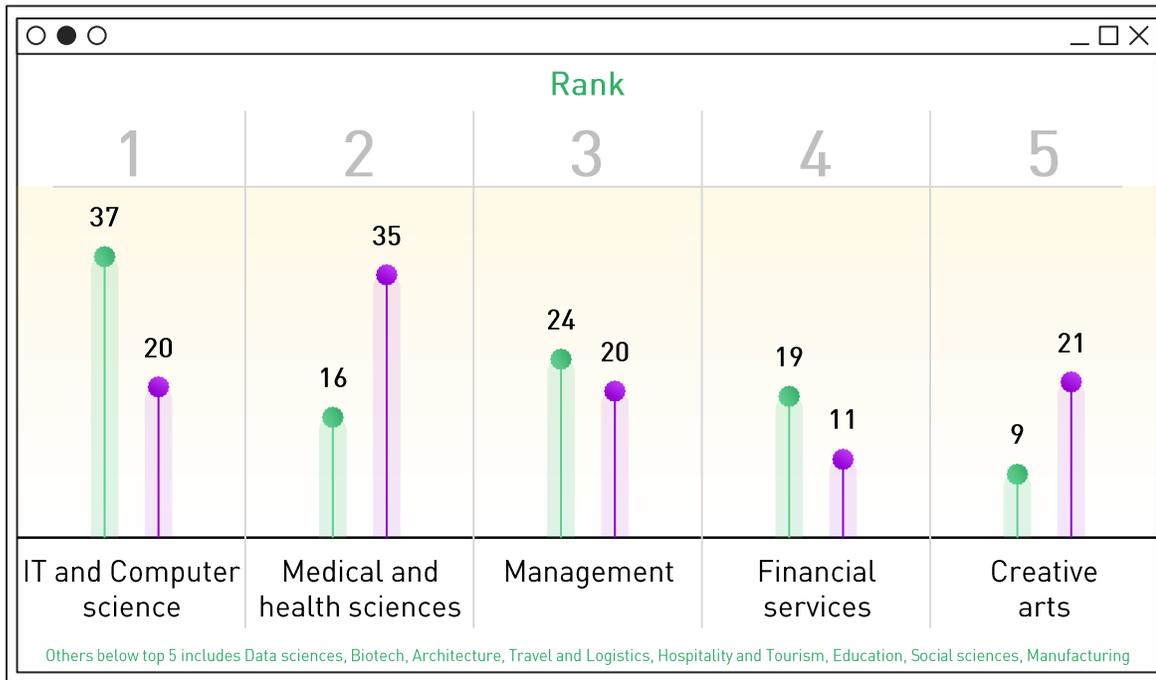
WHAT IS YOUR PREFERRED CAREER FIELD? (% , Top 5)

Male Female

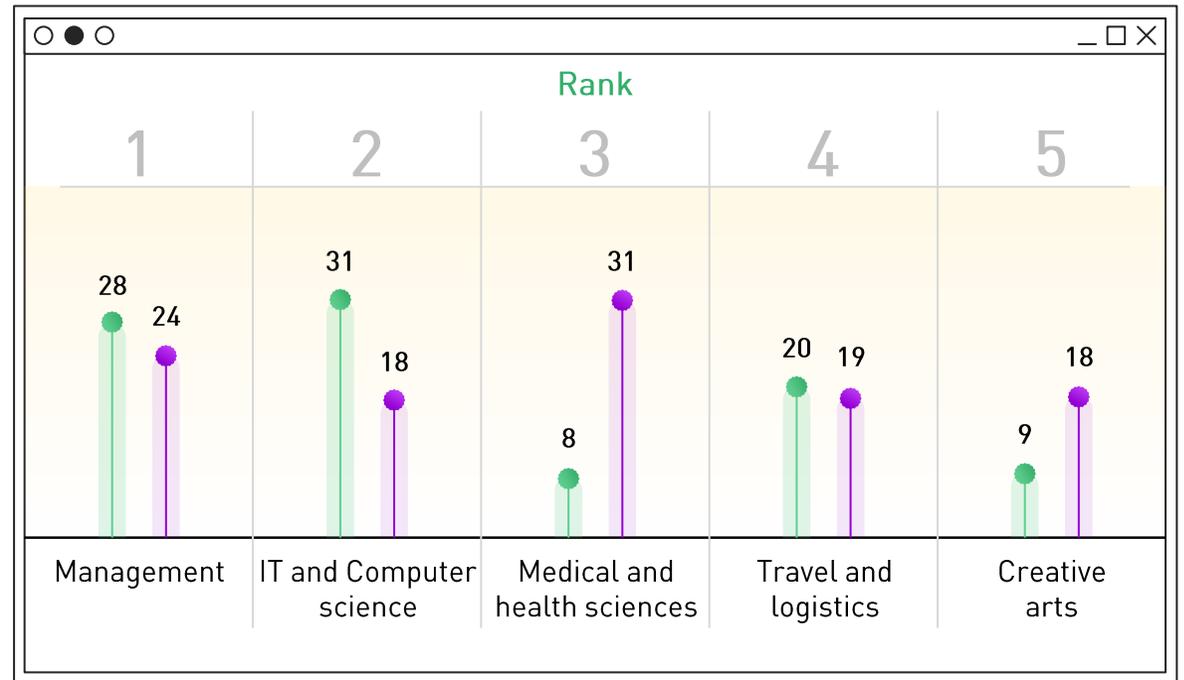
● For residents, finance ranks in the top 5, while nationals show a higher interest in travel and logistics within the same metric

● Females in both segments prefer medicine and creative fields more than males

RESIDENTS



NATIONALS



... EVEN THOUGH IT IS A GLOBAL PRIORITY TO INCREASE INTEREST OF FEMALE STUDENTS ON STEM CAREERS



STEM NATIONAL ORGANIZATION

The Women in STEM campaign is a government-led initiative that aims to increase the participation of women in science, technology, engineering, and mathematics (STEM) careers



K-12 STEM PROGRAMS

NYU Tandon School of Engineering hosts six NYC-based programs and summer courses that provide access to in-depth STEM studies for students at different ages. The programs focus on teaching the creative side of STEM and coding to all age levels



PARTNERSHIP WITH TECH COMPANIES

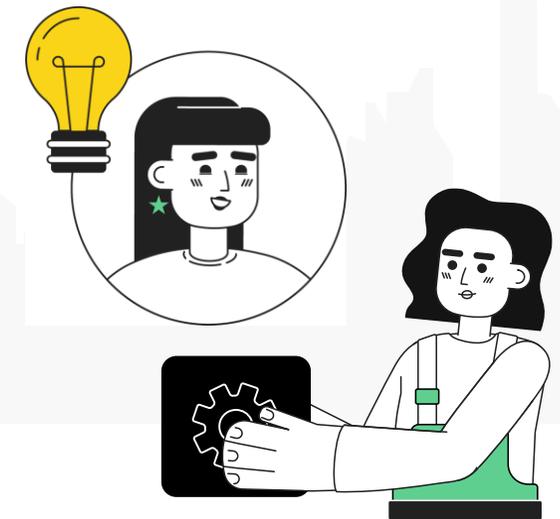
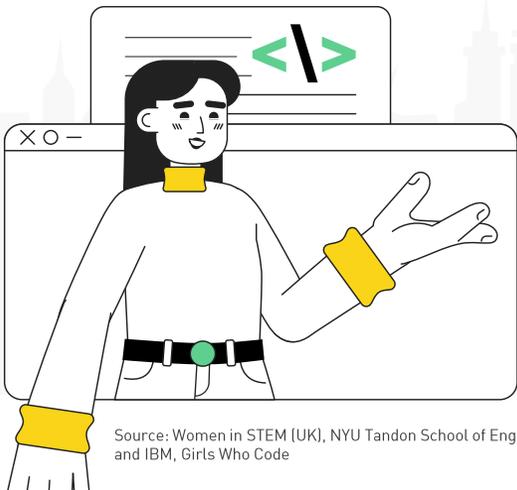
QubitxQubit has partnered with IBM to offer an introduction to quantum computing course targeting high school students. The initiative has fueled interest in the domain within the youth, while also enabling pre-college and college internships at IBM



SUMMER IMMERSION PROGRAMS



The Girls Who Code Summer Immersion Program is a seven-week program that introduces high school girls to computer science and technology. Students learn coding skills, participate in team projects, and visit tech companies to gain firsthand experience in the industry



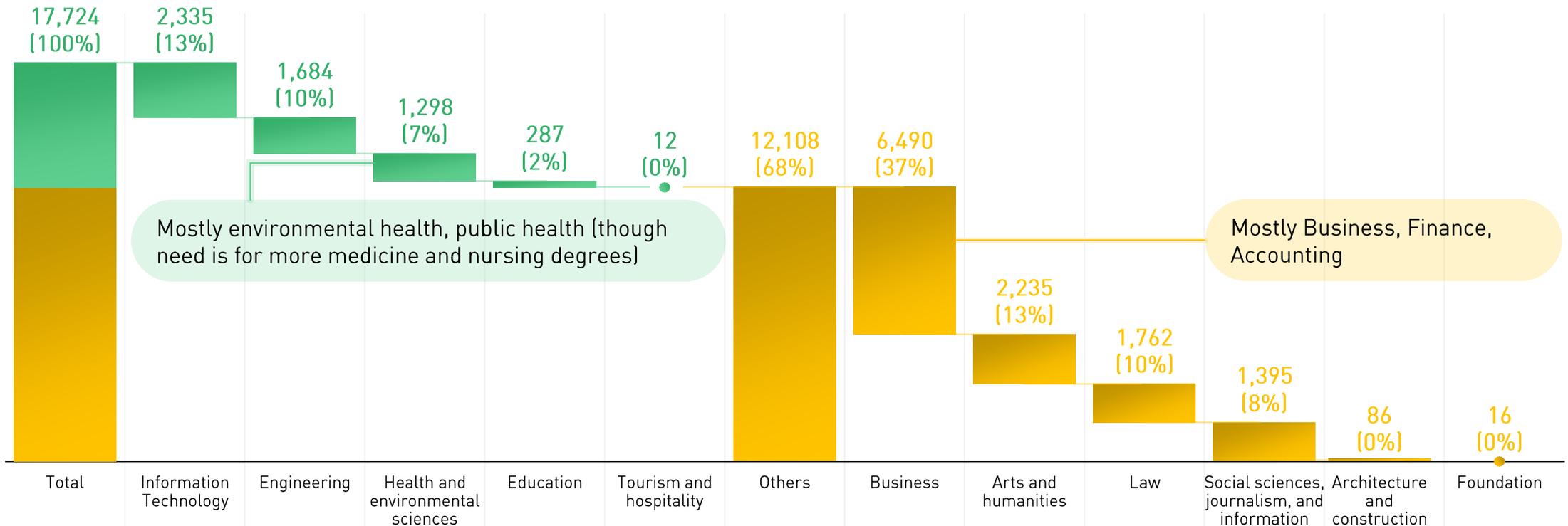
Source: Women in STEM (UK), NYU Tandon School of Engineering, QubitxQubit and IBM, Girls Who Code

IN ADDITION, DATA SHOWS THAT MAJORITY OF EMIRATIS IN TERTIARY EDUCATION ARE SPECIALIZING IN DEGREES THAT DO NOT ALIGN WITH EMERGING JOB ROLES



ENROLLED EMIRATI STUDENTS IN TERTIARY EDUCATION BY FIELD OF STUDY¹ – Emirate of Dubai²

■ Specialized and aligned with D33 degrees ■ Other degrees



1. Examples of majors: Business: Accounting, Finance and Banking; Education: Education, Early Childhood Education, Educational Technology; Engineering: Smart Grid System, Architecture, Telecommunication Engineering; Architecture and construction: Interior Design, Architecture; Health and Environmental Sciences: Environmental Health, Pharmacy, Public Health, and Nutrition; Information Technology: Cybersecurity, Network Security, Cloud Computing; Law: Security and Criminal Sciences, law and political sciences; Arts and Humanities: Psychology, International Studies, Crisis Management; Social sciences: journalism and information: Integrated Marketing Communication, Public Relations; Natural Sciences: Technology (Solar and Alternate Energy), Biology; Tourism and Hospitality: Hospitality and Events Management, Science International Tourism Management
 Source: DDSE, "Enrolled Students in Tertiary Education by Type of Institution, Nationality, and Gender, 2020"
 2. Data does not cover Nationals studying abroad or in other Emirates, data has been captured in 2020

WITH REGARDS TO SKILLS BUILDING, EDUCATORS BELIEVE THAT STUDENTS ARE NOT ADEQUATELY EQUIPPED FOR THE FUTURE IMPACT OF TECHNOLOGY



% OF STUDENTS BELIEVING THAT TECHNOLOGY WILL HAVE AN IMPACT ON THEIR FUTURE IN THE COMING 10 YEARS



82% of students agree and/or strongly agree that technology will have an impact on their future in the coming 10 years...



% OF STUDENTS AWARE OF THE SKILLS REQUIRED TO BE SUCCESSFUL IN THE FUTURE



22% of Counsellors and Headmasters believe that more than 80% of their students are aware of what future jobs require

THIS PRESENTS AN OPPORTUNITY FOR DUBAI'S K-12 EDUCATION SYSTEM...



Non-exhaustive



OPPORTUNITIES IN SKILLS BUILDING

01

Incorporate more **hands-on experimentation and real-world applications** to provide students with valuable practical exposure and mentoring

02

Integrate **subjects across disciplines** to deepen understanding and apply knowledge more holistically, preparing students for multifaceted challenges

03

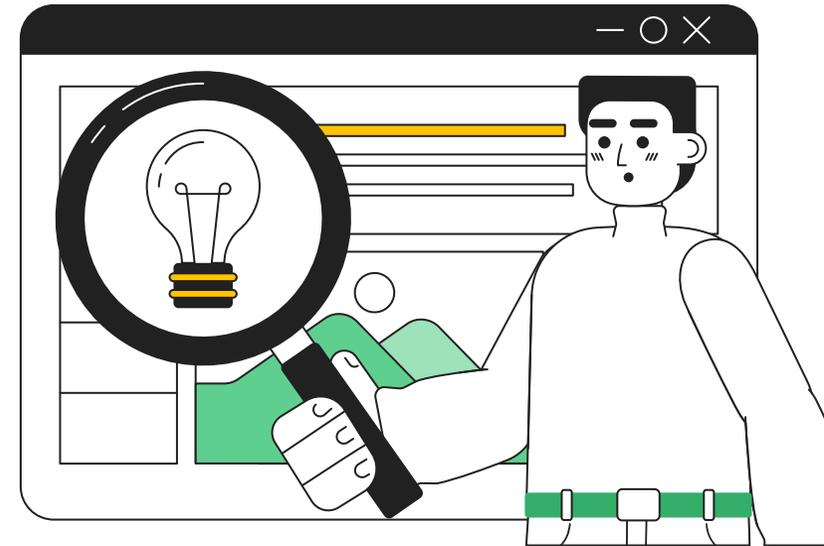
Increase focus **global communication and multicultural awareness** to better equip students to thrive in an interconnected world

04

Invest in the necessary **tools, resources, and teacher training** to enable the adoption of innovative learning methods and drive educational progress

05

Shift the focus from **just academic achievements to also cultivating essential foundational skills** for future success



... TO INCREASE FOCUS ON DEVELOPING FOUNDATIONAL SKILLS

Non-exhaustive



FOUNDATIONAL SKILLS

01

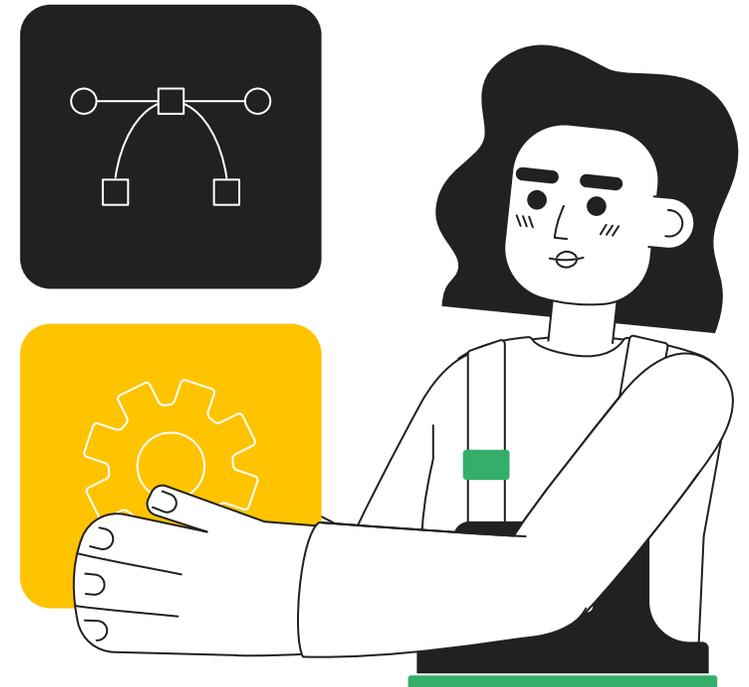
HARD SKILLS

- Technological literacy
- Data analysis and statistics
- Basic digital competencies
- Networks and cybersecurity

02

SOFT SKILLS

- Creative thinking
- Teamwork
- Communication
- Time management
- Problem solving
- Decision making



IN ADDITION, DUBAI IS WELL POSITIONED TO BE AT THE FOREFRONT OF BUILDING FUTURE SPECIALIZED SKILLS SUCH AS BIONIC SKILLS AND EMOTIONAL INTELLIGENCE



DUBAI KEY HIGHLIGHTS

World's Best Cities

#2 Globally in World's best cities (ahead of London and NYC), 2022¹

Destination for Holidays

#1 World's most popular destination for holidays, 2023

Talent Competitiveness

#2 in MENA Global Talent competitiveness index



60+ Universities

60+ Universities, growth of ~2.2x in 15 years

17 Diverse Curricula

17 diverse curricula offered in Dubai K-12 education



FUTURE SPECIALIZED SKILLS

Bionic skills

Proficiency in AI, robotics, data-driven decision making, AI-enhanced creativity, and navigating virtual realities like the metaverse will be essential



Existential capabilities, mindsets, and habits

Success will require mindfulness, self-regulation, adaptability, grit, decisiveness, and optimism, applicable in both personal and professional contexts



Human-to-human, team-focused, and community-focused skills

Effective interaction and emotional intelligence are crucial for organizational success



1. Based on Euromonitor International's Top 100 City Destinations ranking, evaluated across six 'key pillars' – economic and business; tourism performance; tourism infrastructure; tourism policy and attractiveness; health and safety; and sustainability

THEREFORE, IT IS ESSENTIAL TO ALIGN THE FUTURE JOB MARKET AND ESSENTIAL SKILLS FOR SUCCESS, AND FOCUS ON THE REQUIRED EDUCATIONAL PATHWAYS TO SUPPORT THESE SKILLS



SKILLS NEEDED FOR THE FUTURE

- Provide stronger push to close the gap in future foundational skills
- Support students to understand the future specialized skills required for a future heavily impacted by technology
- Increase focus on “non-traditional” skill building such as meta skills and technology skills



THE ROLE OF SCHOOLS IN SKILLS DEVELOPMENT

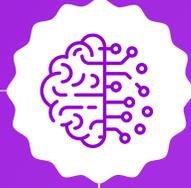
- Increase focus on integrating skill building as part of the curricula
- Ensure students have exposure to relevant extra-curricular activities and online courses



EDUCATION PATHWAYS

- Increase STEM excitement especially for female students
- Increase career exploration activities through immersive and interactive initiatives
- Strengthen attractiveness of Dubai university education to retain residents and better equip nationals



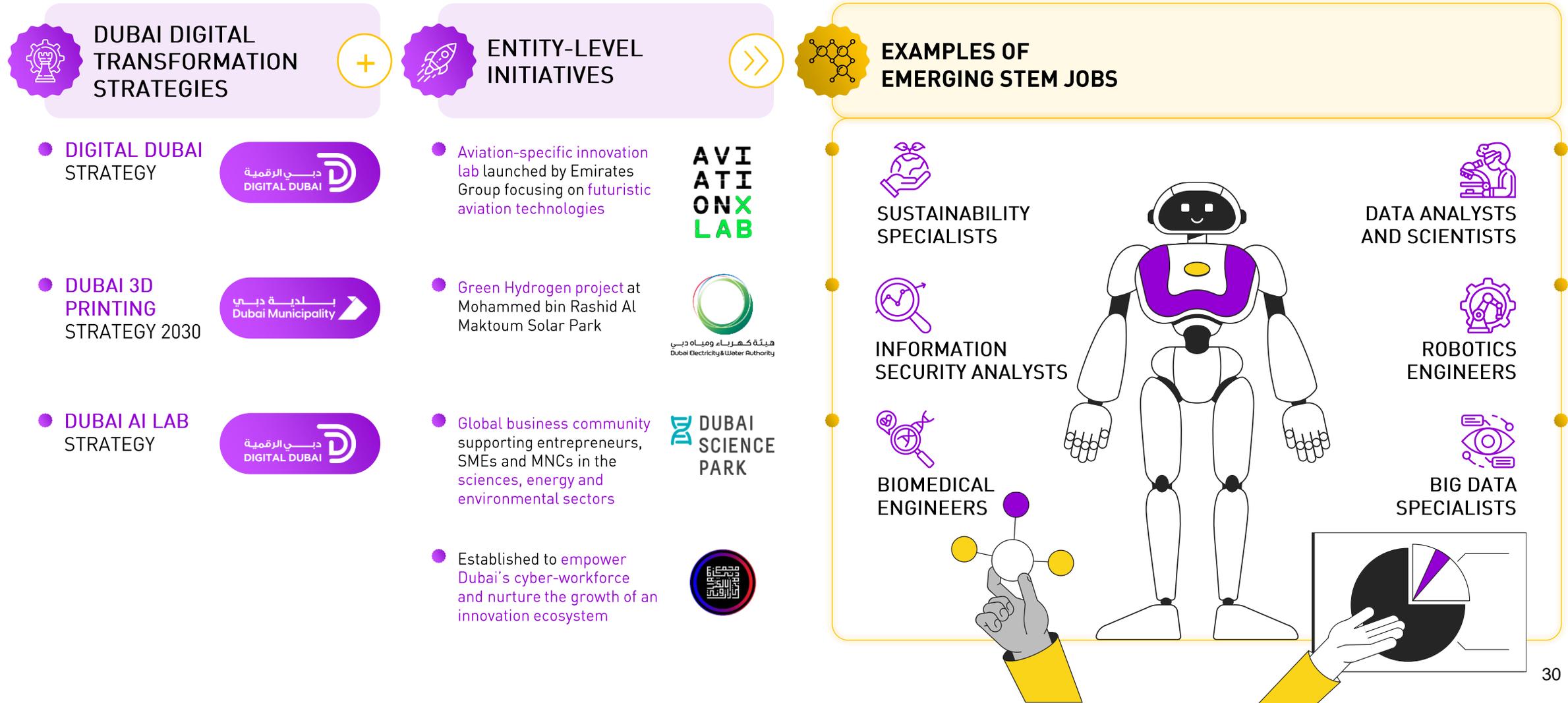


03.

EMERGING JOB ROLES AND
ESSENTIAL SKILLS
FOR SUCCESS

DUBAI GOVERNMENT AND SUPPORTING ENTITIES ARE ADOPTING TECHNOLOGY ADVANCEMENTS AND DIGITAL TRENDS, NATURALLY INCREASING DEMAND FOR STEM FIELD ROLES

Non-exhaustive

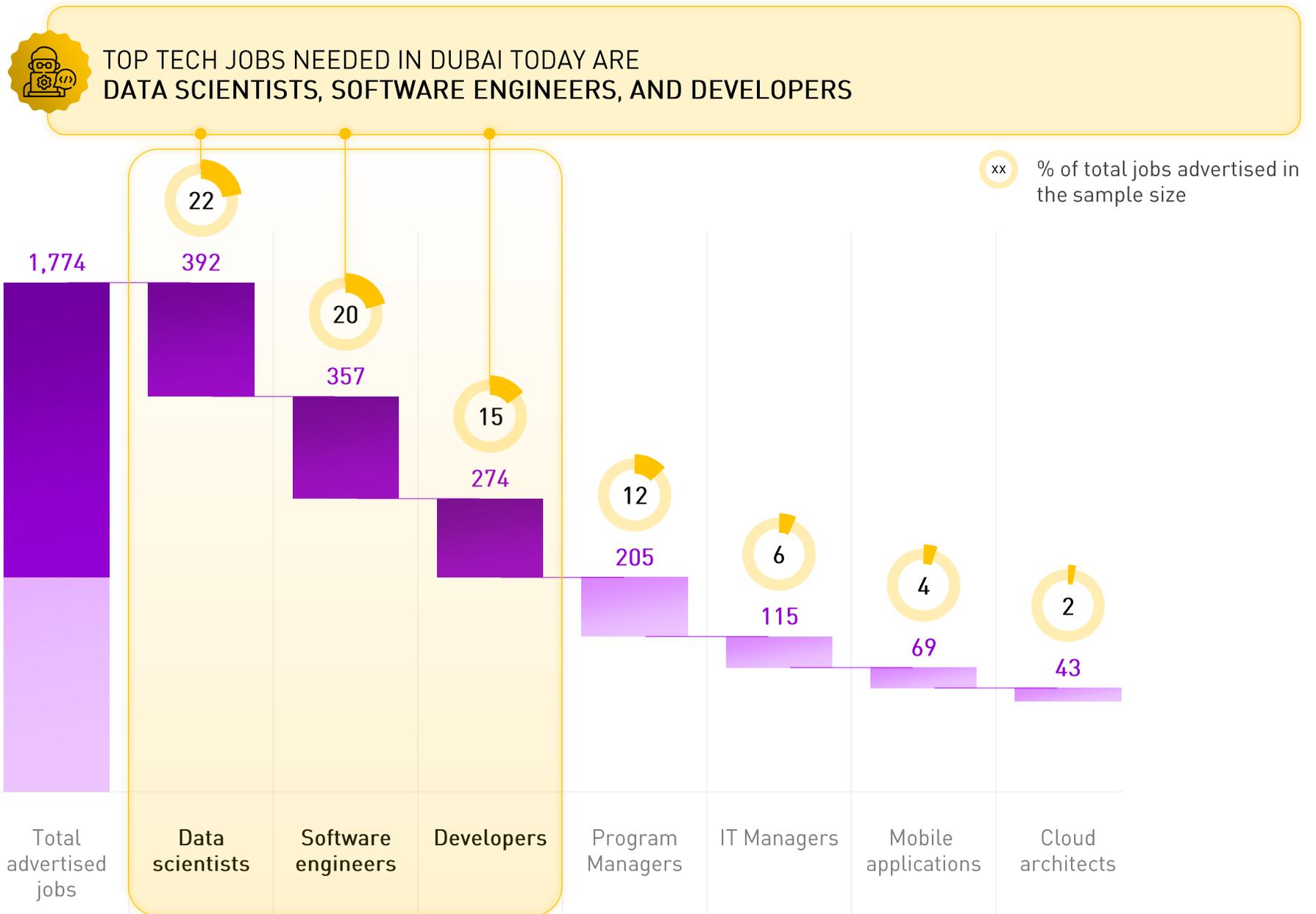


FOR EXAMPLE, ~1,800
TECH JOBS WERE
ADVERTISED IN
DUBAI WITHIN 1
MONTH, WITH
HIGHEST DEMAND FOR
DATA SCIENTISTS,
SOFTWARE
ENGINEERS, AND
DEVELOPERS



BREAKDOWN OF TOP JOBS ADVERTISED IN DUBAI IN THE TECH SECTOR¹

Sample of ~1,800 jobs
advertised on LinkedIn



1. In some cases, the same job can be posted twice or more under different key words
Source: LinkedIn Jobs Analysis

MOREOVER, GREEN JOBS RELATED TO SUSTAINABILITY AND ENVIRONMENTAL MANAGEMENT WILL CONTINUE TO EMERGE FROM RELATED STRATEGIES AND INITIATIVES IN DUBAI

Non-exhaustive



THESE EMERGING ROLES ARE WELL-ALIGNED WITH THE JOBS THAT DUBAI REQUIRES TO ACHIEVE ITS D33 TARGETS...

Sectors	Net Increase in Additional Employees (D33 target), '000
Manufacturing	95
Accommodation and food	60
Admin and support	60
Education	55
Finance and insurance	50
Real estate	40
Health	40
Information and communication	35
Professional, scientific, and technical services	35
Reskilling across sectors ¹	300
Total	~765K new jobs across sectors

 Science
  Technology
  Engineering
  Mathematics
  Green Transition

EXAMPLES OF REQUIRED ROLES

- 
Biomedical Engineers

- 
Chemical Engineers

- 
FinTech Engineers

- 
Data Analysts and Scientists

- 
Big Data Specialists

- 
Logistics - IoT Specialist

- 
Storage - Supply Chain Managers

- 
Pharmaceutical researchers

- 
Process Automation Specialists

- 
Risk management specialists

- 
AI and ML specialists

- 
Software and App Developers

- 
Logistics - Management and Organization Analysts

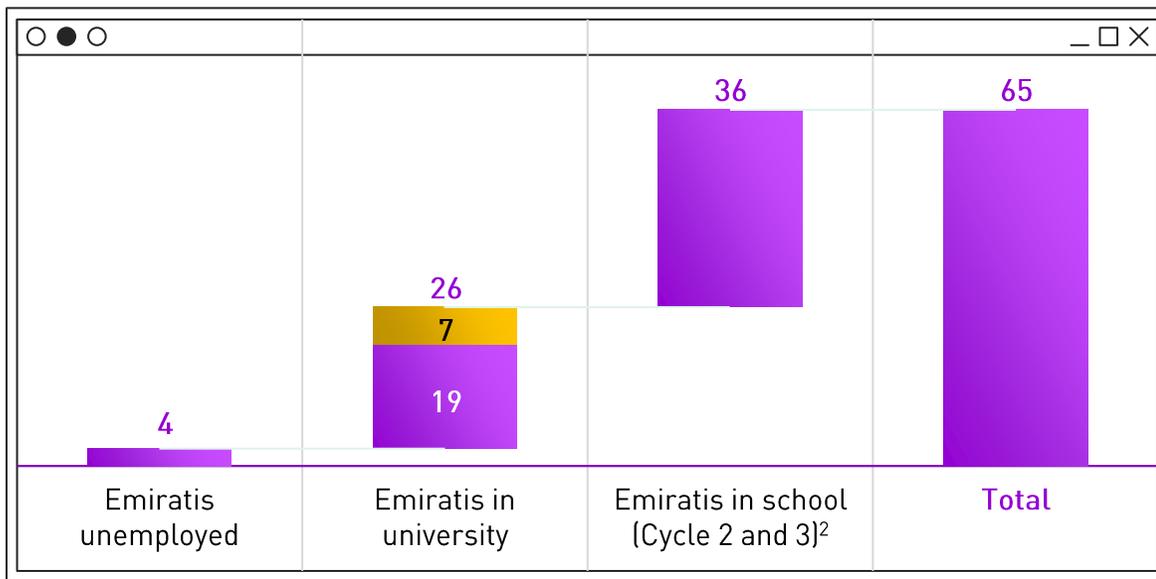

Source: The Dubai Data and Statistics Establishment
 1. In 2019, 1.9Mn blue-collar employees were active. For 2031, reduced to 1.5Mn meaning a 400K drop (108K reduced from workforce and remaining 300K substituted by higher skilled labor)

...AND WILL BE SUPPORTED BY THE INTEGRATION OF 65K EMIRATIS IN THE PRIVATE SECTOR



Projected Emirati talent joining Dubai workforce by 2033, by their current stage, '000¹

■ Emiratis studying abroad



Of the D33 target to integrate 65,000 Emiratis into the workforce, 95% of those expected to enter the private sector are currently engaged within the education ecosystem

1. Reflect data is based on 2020/21 academic year
 3. Accounting for Emiratis studying in other Emirates that will join Dubai workforce and Dubai students that will not join Dubai workforce



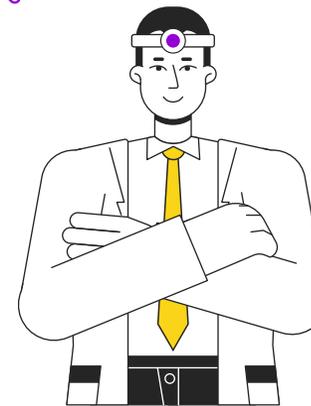
Emiratis to be integrated in private sector, with focus on

Mission-critical sectors

- Healthcare
- Education
- Utilities

Strategic/priority sectors

- Transportation and storage
- Financial sector
- Manufacturing
- ICT
- Wholesale and retail



IN TURN, THIS WOULD BRING DUBAI CLOSER TO ACHIEVING ITS ECONOMIC AGENDA ACROSS PRIORITY THEMES



ECONOMIC AGENDA PRIORITY THEMES

INCREASE PRODUCTIVITY

Increase economic productivity by 50% through innovation and digital adoption

BUSINESS-FRIENDLY ENVIRONMENT

Provide a world-leading business-friendly and sustainable environment (ease of doing business, regulatory environment, ESG agenda)

NATIONAL TALENT

Integrate the next generation of Emiratis into the private sector and attract 1Mn long-term residents to grow our highly skilled workforce

COST COMPETITIVENESS

Create a globally competitive cost environment to facilitate business set-up and operation

ADVANCED MANUFACTURING

Scale manufacturing value add and exports by focusing on advanced modes of production

GLOBAL BUSINESS HUB

Become the fastest growing and most attractive global business hub and operations centre for MNCs, SMEs and local champions

QUALITY OF LIFE

Preserve and advance Dubai's quality of lifestyle, tolerance and safety and security for all

TOP 5 LOGISTICS HUB

Become a Top 5 global logistics hub, across connectivity, services and operations

A TOP 3 DESTINATION

Become a Top 3 global destination for visitors across leisure, business, and specialized services (e.g., wellness)

TOP 4 FINANCIAL HUB

Become a Top 4 global financial hub and a preferred capital market in MEASA



WHILE EMERGING JOBS EMPHASIZE STEM FIELDS AND GREEN TRANSITIONS, SOME INDIVIDUALS WILL STILL PURSUE CAREERS IN HUMANITIES AND SOCIAL SERVICES SUCH AS ART, MUSIC, AND NURSING



CAREER PATH BALANCE

● Societal Importance

Careers in the humanities and social services remain essential for culture, well-being, and societal growth

● Skill advantage

Not everyone is suited for a tech-centric career path, and they can have unique skills and passions that will add value to society. Humanities and social sciences are better for teaching some emerging skills mentioned such as creative thinking, multilingualism, critical thinking, interpersonal skills, leadership and social influence

However, preparing for careers in humanities and social services requires the development of both soft skills and technological skills



SOFT SKILLS

● Soft Skills

Communication and storytelling; critical thinking and analysis, creativity and innovation, collaboration and interpersonal skills, cultural competence/awareness, adaptability and lifelong learning



TECH SKILLS FOR HUMANITIES AND SOCIAL SERVICES

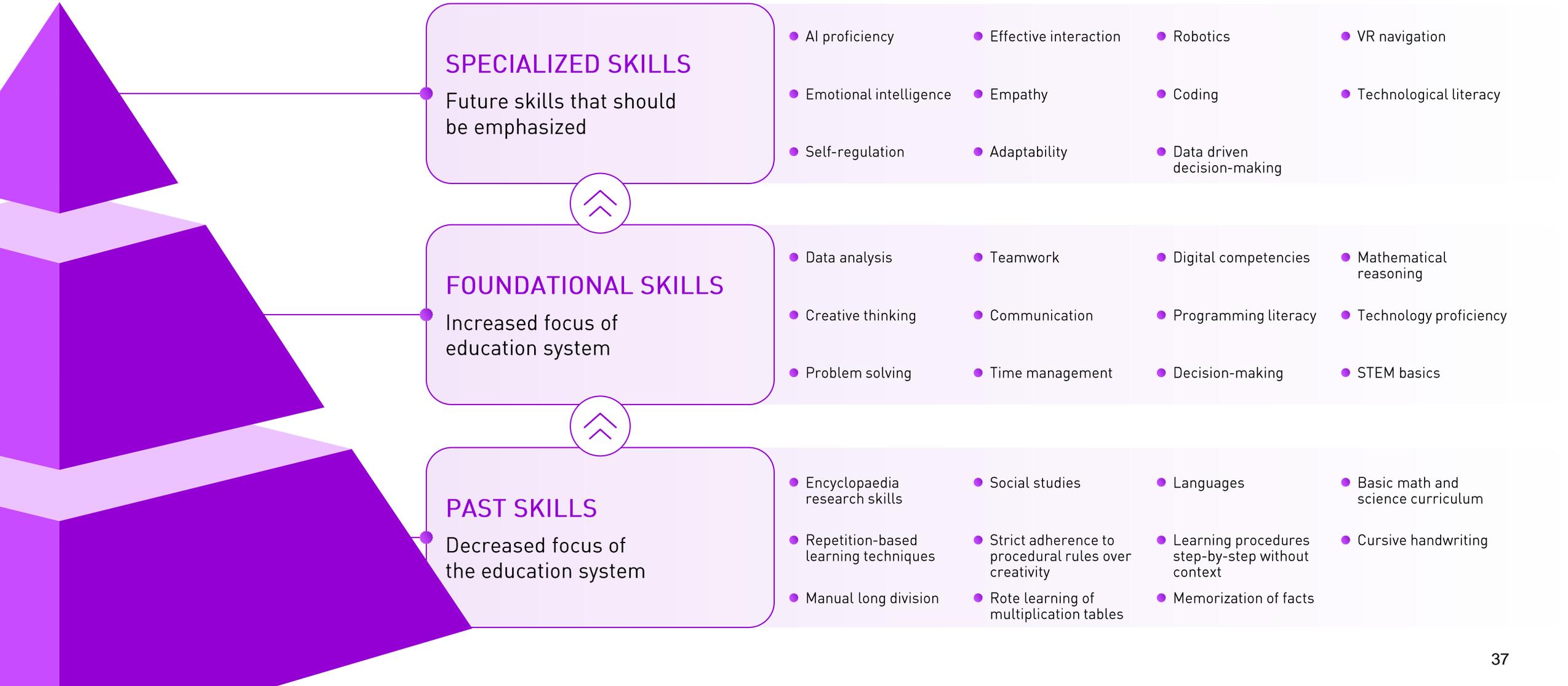
● Technological Incorporation

Non-tech focused careers all incorporate technology to a certain extent, requiring a level of digital proficiency [e.g. Digital art, media editing, music production]

● Tech Skills

Digital literacy, data analysis and visualization, content creation and multimedia skills, social media/digital marketing

TO MAXIMIZE SUCCESS IN EMERGING ROLES, IT IS ESSENTIAL TO EMPHASIZE FUTURE SKILLS AROUND ADAPTABILITY, CONTINUOUS LEARNING, AND INTEGRATION OF TECHNOLOGY WITH HUMAN SKILLS



SPECIALIZED SKILLS
Future skills that should be emphasized

- AI proficiency
- Emotional intelligence
- Self-regulation
- Effective interaction
- Empathy
- Adaptability
- Robotics
- Coding
- Data driven decision-making
- VR navigation
- Technological literacy

FOUNDATIONAL SKILLS
Increased focus of education system

- Data analysis
- Creative thinking
- Problem solving
- Teamwork
- Communication
- Time management
- Digital competencies
- Programming literacy
- Decision-making
- Mathematical reasoning
- Technology proficiency
- STEM basics

PAST SKILLS
Decreased focus of the education system

- Encyclopaedia research skills
- Repetition-based learning techniques
- Manual long division
- Social studies
- Strict adherence to procedural rules over creativity
- Rote learning of multiplication tables
- Languages
- Learning procedures step-by-step without context
- Memorization of facts
- Basic math and science curriculum
- Cursive handwriting



04.

BUILDING BRIGHTER
FUTURES: EDUCATIONAL
PATHWAYS AND
INNOVATIVE LEARNING

IN LINE WITH OUR PRIMARY RESEARCH, STUDENTS BELIEVE THAT INTEGRATING SKILL BUILDING INTO CURRICULA IS THE PREFERRED METHOD TO STRENGTHEN FUTURE SKILLS...



HOW CAN YOUR SCHOOL BETTER PREPARE YOU MOVING FORWARD?



STUDENTS



...AND SEE DIGITAL LEARNING AS ESSENTIAL FOR DEVELOPING SKILLS BEYOND SCHOOL, ESPECIALLY IN CODING, SOFTWARE DEVELOPMENT, AI, AND MACHINE LEARNING – KEY AREAS ALIGNED WITH FUTURE WORKPLACE PRIORITIES



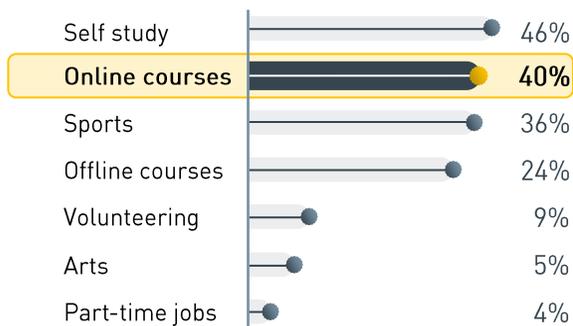
ARE YOU DEVELOPING ADDITIONAL SKILLS VIA EXTRACURRICULAR ACTIVITIES?



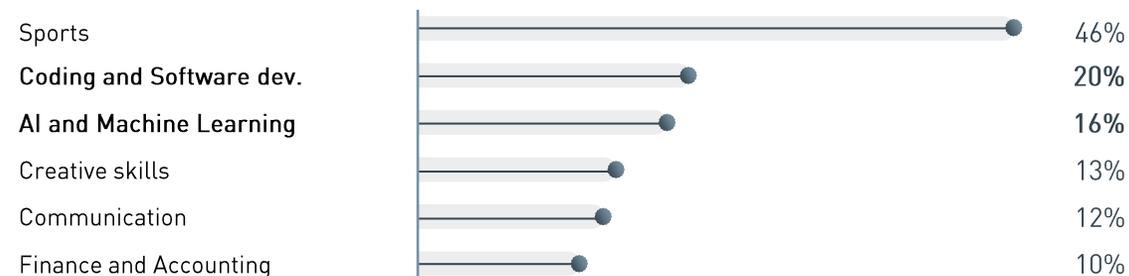
57%
MALE



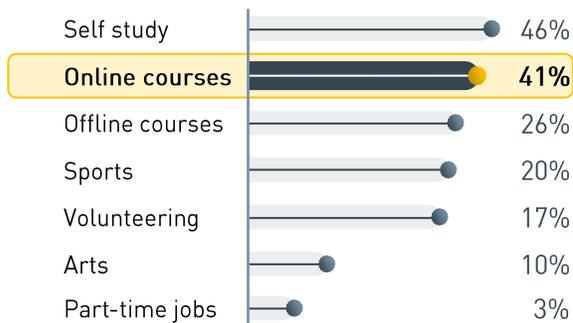
WHERE ARE YOU LEARNING THESE SKILLS?¹



WHICH SKILLS DO YOU FOCUS ON? (TOP 4)



46%
FEMALE



1. Responses are not exclusive, as participants could select multiple answers
Source: The Dubai Future of Jobs Survey 2023

EVIDENCE OF NEW INNOVATION ADOPTION SHOWS A POSITIVE IMPACT ON THE EDUCATION SECTOR

01

PERSONALIZED, VISUALIZED AND CROWDSOURCED LEARNING



Truly adaptive learning solutions, e.g., Powered by AI technology/AR/VR, curating materials from multiple sources



estimated decrease in the average price of VR headsets

03

GAMIFICATION



Emergence of new engaging ways of learning driven by technology (apps, immersion)



increase in completion rates through achievement badges and competition

02

TECH-ENABLEMENT AND SEAMLESS LEARNING JOURNEYS



Proliferation of tech-enabled classrooms, new tools and systems ("offline digital", blended learning)



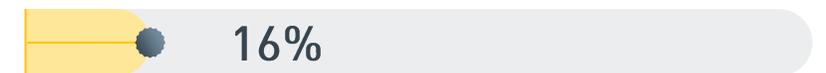
of teachers feel their ability to effectively use EdTech has "improved a lot"

04

TRANSPARENCY ON LEARNING EFFICACY AND OUTCOMES



Increasing attention to student outcomes with data and analytics enabling improved decision making



retention boost via data enabled student support ecosystems

CASE STUDY: FINLAND'S EDUCATION SYSTEM FOCUSES ON INTERDISCIPLINARY LEARNING WHERE STUDENTS EXPLORE REAL-WORLD PHENOMENA TO SUPPLEMENT TRADITIONAL CLASSES



Finland's National Core Curriculum (2016) mandated Phenomenon-based Learning (PhenoBL) which focuses on interdisciplinary learning where students **explore real-world phenomena** rather than isolated subjects like math or history. This model encourages a holistic, cross-curricular view of education



PHENOMENON-BASED LEARNING

- **Interdisciplinary Focus**
Students aged 7-16 participate in at least one multidisciplinary module per year, integrating knowledge from various subjects to analyze a phenomenon from different perspectives. The PhenoBL aims to supplement rather than replace traditional classes
- **Teacher Collaboration**
The reforms mandate 'study periods' during which teachers from multiple disciplines come together to teach one multidisciplinary module per year
- **Application in Classrooms**
Teachers and students collaborate to choose relevant phenomena, often using local issues or global challenges as starting points. Problem-based and inquiry-based learning methods guide investigations, often requiring cross-subject collaboration among teachers

● Benefits

01

Prepares students for future challenges like sustainability and AI by encouraging multidisciplinary problem-solving



02

Promotes creativity, critical thinking, open-mindedness and empathy by exposing students to diverse perspectives on complex topics



IN THE SHORT TERM, DUBAI CAN FOCUS ON 6 KEY AREAS TO ADDRESS THE SKILLS GAP IN THE WORKPLACE...



SHORT-TERM FOCUS



ENCOURAGE STEM EDUCATION

Increase excitement of stem education, especially for female students



PROMOTE INTERDISCIPLINARY STUDIES

Integrate knowledge from multiple fields to equip students with the diverse skills and adaptability needed for emerging roles in the future job market



INTEGRATE SKILLS INTO CURRICULA

Incorporate niche and specialized skills building into school curricula that can be adopted by students



PROMOTE CAREER APTITUDE TESTS

Leverage online tools (e.g., Myers-briggs type indicator) to help students gain insight into their skills, talents, aptitudes, values, personal potential, and interests to choose suitable professions



RECOGNIZE INDUSTRY ENABLED EDUCATION

Allow learners to opt for a more applied education through experiential learning, corporate training, dual education, private sectors certificates, etc.



ADVOCATE FOR LIFELONG LEARNING

Encourage flexible upskilling and reskilling education offerings to keep pace with technological advancements and evolving job requirements

...LOOKING AHEAD, DUBAI CAN EMBRACE NEW LEARNING METHODS TO ALIGN WITH FUTURE JOBS AND MARKET DEMANDS



MID-TERM FOCUS



ADOPT PERSONALIZED LEARNING

Implement **self-paced, continuous lifelong learning journeys tailored to individual student needs and interests** by giving them the option to decide what, when, and how to learn



INTEGRATE HUMAN-CENTRIC EDUCATION

Focus on **interpersonal skills, emotional wellbeing, and health** by aligning learning schedules with students' biological clocks and embedding these aspects into the curriculum



LEVERAGE AUGMENTED EDUCATION TECHNOLOGIES

Provide each learner with **adaptive learning experience** through progressive **roll out of new technology**. Utilize **AI** and **virtual environments** to provide competency-based assessments and immersive learning experiences that make concepts easier to grasp



EMBRACE DISTRIBUTED EDUCATION MODELS

Integrate **new learning modes** within education system to **increase flexibility** on how and where to learn. Make education **location-independent** by using **blended learning and virtual worlds**



PRIORITIZE VOCATIONAL CURRICULUM

Partner with industry experts to **co-develop vocational curricula**, and introduce a **national modular curriculum** that is continuously updated to integrate technological advancements and address shifting market demands

BY DOING SO, THE FUTURE OF DUBAI'S EDUCATION SECTOR WOULD ALIGN WITH FUTURE JOBS AND MARKET DEMANDS



TARGET STATE

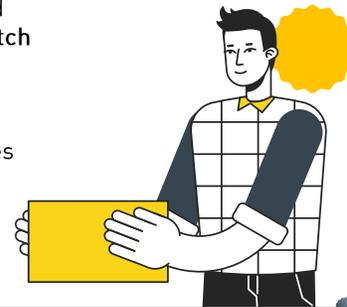
D33 JOBS

Academic courses and programs aligned with labor market needs (D33 jobs)



SKILLS THAT MATCH DEMANDS

Graduates equipped with skills that match the demands of future industries, including STEM and green economy roles



EMIRATIS ARE WELL-PREPARED

Emiratis are well-prepared and integrated into the private sector, contributing to a diverse and competitive workforce



GLOBAL CAREER COUNSELING LEADER

Dubai becomes globally recognized as a leader in career counselling and lifelong learning, with career guidance embedded in the education system



STRONG PUBLIC-PRIVATE PARTNERSHIPS

Strong public-private partnerships driving reskilling and upskilling initiatives to ensure continuous adaptability to market shifts



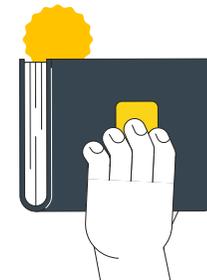
INTERDISCIPLINARY STUDIES

Increased focus on interdisciplinary studies and real-world applications, enhancing student readiness for emerging roles



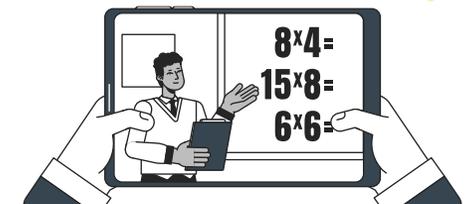
LIFELONG LEARNING

Lifelong learning becomes a cornerstone of the education system, with flexible pathways supporting continuous skills development



INNOVATIVE LEARNING METHODS

Enhanced use of technology and innovative learning methods to provide personalized and immersive learning experiences



About The Department of Economy and Tourism

The Department of Economy and Tourism (DET) is the principal authority for the supervision and development of Dubai's economy and tourism sectors, with the ultimate vision of positioning Dubai as the world's leading business hub and tourism destination.

DET is the custodian for the Dubai Economic Agenda, D33, which was announced by His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai. This forward-looking initiative represents Dubai's leadership aspiration for the future, aiming to drive sustainable economic growth through innovative approaches and double the GDP by 2033, making Dubai the fastest, safest, and most connected city in the world.



About Knowledge and Human Development Authority

The Knowledge and Human Development Authority (KHDA) is the government authority responsible for the growth and quality of private education in Dubai. They support students, parents, educators, early childhood centres, schools, universities, training centres, investors and government partners to co-create a global and innovative education sector.

KHDA serves as the custodian of the Education 33 mandate, announced by His Highness Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai, Deputy Prime Minister, and Chairman of The Executive Council of Dubai, marks a new milestone in Dubai's efforts to create a future-ready education system. Guided by the forward-thinking vision of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, this landmark strategy aims to empower future generations with the skills, knowledge, and values needed to lead in an ever-evolving global environment.



حكومة دبي
GOVERNMENT OF DUBAI



دبي
للاقتصاد والسياحة
Economy and Tourism

دبي
المعرفة
Knowledge

