

By Joshua Chaffin

As a girl growing up in an English-speaking household in Singapore, Prema Gurunathan grudgingly studied Mandarin. Now a mother in west London, she is taking no chances with her own son.

When he turned one Ms Gurunathan insisted their household in Hammersmith spoke Mandarin for half of each week. She recruited a Taiwanese au pair. And last month, she and her husband enrolled the three-and-a-half year-old at Kensington Wade, a newly opened London school that promises full Mandarin immersion for its pupils.

"It's intellectual, it's cultural and it's 'future-proofing', if you will," said Ms Gurunathan, a self-confessed "tiger mom" and policy wonk, explaining her school choice. "And it's fun."

Sir Martin Sorrell, the Sinophile chief executive of the advertising conglomerate WPP was at Kensington Wade on a recent evening, for a reception to celebrate the Chinese mid-autumn festival.

"Chinese and [computer] code - those are the two languages as far as I'm concerned!" Sir Martin declared, offering assurance to the gaggle of parents that the £17,000 tuition they had shelled out for Kensington Wade was money well spent.

A craze for Mandarin, largely confined to affluent families in London, seems at odds with Britain's pastime of convincing others to learn its tongue. Still, it moved into full swing under the previous Conservative government when George Osborne, the then chancellor, offered primary schools £10 million to introduce classes.

For those parents inclined to start their children early, there is Hatching Dragons, the UK's first Mandarin-English nursery. It claims to "foster fluency" in both languages by age 5, and has just opened a second London location with a third soon to follow.

"I've got enough evidence that if a child joins us at six months and stays until they are five, fifty hours a week, they will be orally fluent," said Cenyydd John, who founded Hatching Dragons in 2015, after the birth of his son. If you doubt him, says Mr John, go check his YouTube videos.

In the US, there are now a few hundred schools offering immersive Mandarin education, not only on the coasts but also in places like Kansas and Nebraska. This year's National Chinese Language Conference drew more than 1,200 teachers and other attendees to Houston to compare notes.

"Chinese is the emerging language because China is emerging as a political and economic power," said Antonella Sorace, a linguistics professor who founded the Bilingualism Matters centre at the University of Edinburgh. "It's regarded as a good investment."

Or, as Ms Gurunathan said: "A lot of Chinese people will be speaking brilliant English [in the future], but it gets you through the door."

The brainchild of Professor Hugo de Burgh, a specialist in Chinese me-

Inside the UK's first bilingual English and Chinese primary school



dia, Kensington Wade has been years in the making - not least because of the challenge of finding property in west London.

The school aims to combine two teaching styles: the highly disciplined 'Shanghai model' of maths with the critical thinking prized in British education

speakers while about half had no Mandarin. They were shepherded by parents from the US, South America, Russia, Europe and Great Britain.

"Highly intelligent business people who are either working with China or understand the importance of it, with high aspirations for their children," is how Jo Wallace, Kensington Wade's head teacher, describes them.

The school's funding comes from a group of socially minded private investors, according to Prof de Burgh. The Chinese government has contributed nothing more than a few textbooks.

Its two classrooms, in an existing academy, are unremarkable, with play kitchens, toys and early reading books. On closer inspection, it becomes apparent that one is entirely in English and the other in Mandarin. One teacher is British; the other Chinese. The children move between them and their corresponding worlds during the day. The hope is that by age 11, when they graduate - and presumably move on to a private prep school - they will be fluent in both.

Kensington Wade also aims to combine two teaching styles. It touts the renowned and highly disciplined "Shanghai model" of maths, in which students do not advance until the en-

tire class has mastered a skill, with the creativity and critical thinking prized in British education.

The school's Sino-Anglo heritage is also evident in its new uniforms. The claret and gold togs feature Chinese tailoring and a distinctive griffin logo. Think: Harry Potter in Shanghai.

The benefits of bilingual education are alluring, including greater cultural empathy and cognitive flexibility. But it is a misconception that it makes children more intelligent, according to Prof Sorace, and the results are not guaranteed. "It's not automatic and there are many, many factors that can affect whether these benefits come out," she said.

One is the extent to which parents continue the language in the home (kudos to Ms Gurunathan). Another is the quality of teaching.

Then there is the question of whether children view the language as being useful - the bane of Greek and Latin teachers. "The language has to be part of their everyday life," Prof. Sorace explained.

Part of the challenge for Ms Wallace, the former head of the junior school at Putney High, a highly regarded girls school, is to convince a discerning group of parents that Kensington Wade is not a leap into

the unknown.

In April, she visited three schools in the San Francisco area that have been offering immersive English-Mandarin instruction, one for more than 30 years.

"I went with the worry that these little kids were going to be confused, that they'd be stressed. And all I saw was children having a lovely time," she recalled, although she acknowledged that some parents would have to "hold their nerve" in the early days.

Patrick Lee, a Cantonese speaker originally from Hong Kong, was not initially sold. Still, he and his Spanish wife signed up their twin three-year-olds and Mr Lee claimed to see a difference after just a few weeks, with the kids singing Mandarin songs at home. In any case, he added: "The concept of having two languages is normal to us."

He was chatting with Ms Gurunathan's monolingual husband, Michael Pritchett, who took the long view about Kensington Wade and its young pupils. "I guess the proof in the pudding will be in 20 years' time," he said.



European airlines face more cuts and consolidation

By Tanya Powley

More than 750,000 people woke up last Monday to discover what every holiday-maker dreads - their flights had been cancelled after the airline they were using had collapsed.

Monarch, the UK's fifth-biggest airline, had entered administration in the early hours of the morning after the group failed to find a last-minute buyer for the business.

On the same day, the UK government kicked off Britain's "biggest ever peacetime repatriation" as it began flying home the first of 110,000 holidaymakers stranded overseas, an operation expected to take two weeks.

But an estimated further 750,000 Monarch customers have seen their future flights cancelled.

The collapse of Monarch highlights just how cut-throat competition in the European short-haul market has become. It is the third failure of an European airline in six months. Both Air Berlin and Alitalia went into insolvency proceedings this summer, after struggling to cope with the intense competition from rival carriers.

While the European short-haul market has been extremely competitive for the past two decades, as low-cost airlines have aggressively grown their share of the market, lower fuel prices have contributed to an increase in competition in recent years.

"Some airlines have kept going longer than they would have and some have put more capacity in as

a result of cheaper fuel," says Jonathan Wober, aviation analyst at CAPA Centre for Aviation.

"But there is a self-correcting mechanism here - the capacity glut leads to plummeting unit revenues, and those that don't have the cost base to survive plummeting unit revenues eventually do suffer and disappear. You almost need that situation to cut the dead wood out."

Just 15 years ago, budget airlines had just over 9 percent of market share in Europe. Today they provide more than 40 percent

One of the critical problems has been the rapid consumption of market share by the low-cost airlines over the past 30 years as they have aggressively focused on cheap fares.

In Europe, this has seen low-cost carriers, such as Ryanair and easyJet, tear chunks out of the short-haul market.

Just 15 years ago, budget airlines had just over 9 percent of market share in Europe. Today they pro-

vide more than 40 percent of all scheduled airline capacity in western Europe as their networks expand.

This has led to a fundamental change in the market, with full-service carriers aping many of the practices successfully introduced by low-cost carriers. This has seen most carriers offer seat-only fares and charge for baggage and other services.

As a result, it has become much harder to differentiate between the service offerings from a low-cost airline to a legacy carrier as the market has concentrated on price.

One of the fiercest battlegrounds in the market has been Spain.

The flood of capacity into the country was one of the main reasons why Monarch gave up its fight after it was unable to compete with the low prices on offer. The market, together with Portugal, represented about 80 percent of its business after it had to reduce the number of flights into Egypt, Turkey and Tunisia, where tourism suffered following terrorist attacks.

Data from OAG shows that Spain has seen the addition of about 16 million seats into the market over the past two years as carriers throughout Europe have added capacity after vacating high risk markets.

The key year was 2016 when there was year on year growth of 14 percent. "In a mature market that is an almost unprecedented level of increase," says John Grant at OAG.

The capacity of the troubled

airlines is likely to attract interest from rivals.

All three airlines that have entered insolvency proceedings this year - Monarch, Air Berlin and Alitalia - have one thing in common: they have been struggling for years. All three have seen their market share fall as more and more low-cost capacity moved into the market.

In the past three years, Monarch has been saved from collapse twice with emergency cash injections from London-based investment group, Greybull Capital, which bought the airline in 2014 two hours away from insolvency. In the year to October 2016, Monarch reported a statutory loss of £291 million, compared with a profit of £27 million in 2015.

Germany's Air Berlin had been under pressure for a while after racking up losses of about €2 billion over the past six years, and net debt of €1.2 billion. It has struggled to compete with low-cost carriers and tried several different business models over the years.

Meanwhile, Alitalia's high cost base simply could not compete with the growing penetration of low-cost carriers in the short and medium-haul European market. The Italian carrier has struggled to report a full-year net profit for more than a decade.

For both Air Berlin and Alitalia, which have Etihad as a major shareholder, the situation worsened this year as the Gulf airline began unravelling its own strategy of buying up minority stakes in car-

riers to drive traffic to its hub in the Gulf after facing losses of \$1.9 billion in 2016. This saw it refuse to pump any further money into the lossmaking airlines, leading to their administration.

In the crowded market, the big companies such as Europe's largest low-cost airline Ryanair have fared better.

Despite signs of consolidation this year, Europe's market remains very fragmented compared with other regions

Despite problems over recent weeks, Ryanair sits comfortably in the lead when it comes to operating margins, which highlight the contrasting fortunes of the various groups.

The Irish group had an operating margin in 2016 of 23.1 percent. Wizz Air is in second place with a margin of 15.7 percent.

The troubled airlines have languished at the bottom of the table. Air Berlin and Alitalia had a negative operating margin of 8.8 percent and 18.3 percent respectively.

However, despite signs of consolidation this year with the collapse of the weaker airlines, Europe's market remains very fragmented compared with other regions such as the US.

The biggest six airlines in the US provide 90 percent of all US domestic capacity, while in contrast, the biggest six European carriers provide 43 percent of capacity.

There are more airline groups operating in Europe than in any other region in the world. According to OAG, Europe has a total of 217, compared with 100 in North America.

"The consolidation story [in Europe] is more about the weaker airlines exiting the market and the stronger ones growing their share organically rather than big M&A transactions," says Mr Wober.

The fragmented nature of the European airline market means it is less profitable than its North American counterpart. According to Iata, the airline trade association, North American airlines generate about half of the global industry profit, helped by the consolidation that has taken place that saw the merger of some of the biggest groups.

Carriers in North America are expected to post a \$15.4 billion net profit in 2017, compared with a \$7.4 billion profit for European airlines.

Consequently, Europe still has some way to go in the consolidation process.



A Russian Soyuz 2.1a rocket carrying Lomonosov, Aist-2D and SamSat-218 satellites lifts off from launch



Russia's President Vladimir Putin (foreground left) looks at exhibits as he visits the Cosmonautics Memorial Museum in Moscow

60 years after Sputnik, Russian space program faces troubles

By Vladimir Isachenkov, Moscow

SI X decades after Sputnik, a refined version of the rocket that put the first artificial satellite in orbit remains the mainstay of Russia's space program — a stunning tribute to the country's technological prowess, but also a sign that it has failed to build upon its achievements.

And unlike the Cold War era when space was a key area of the rivalry between the United States and the Soviet Union, space research now appears to rank low on the Kremlin's priorities.

The Soyuz booster, currently the only vehicle that launches crews to the International Space Station, is a modification of the R-7 rocket that put Sputnik in orbit on Oct. 4 1957.

Another Soviet-designed workhorse, the heavy-lift Proton rocket that has been used to launch commercial satellites to high orbits, was developed in the 1960s.

Both rockets established a stellar reputation for their reliability, but their record was tarnished by a string of failed launches in recent years that called into question the Russian space industry's ability to maintain the same high standards of manufacturing.

Glitches found in Proton and Soyuz in 2016 were traced to manufacturing flaws at the plant in Voronezh that builds engines for both rockets. The Russian space

agency, Roscosmos, sent more than 70 rocket engines back to production lines to replace faulty components, a move that resulted in a yearlong break in Proton launches.

The suspension eroded the nation's niche in the global market for commercial satellite launches. Last year, Russia for the first time fell behind both the U.S. and China in the number of launches.

Clients have increasingly opted for new, more efficient and affordable choices, such as the Falcon 9 built by SpaceX, which broke ground in reducing costs by making its rockets reusable.

Russian officials have recognized the challenge posed by SpaceX and others, but they have offered few specifics on how the nation hopes to retain its place in the global market. The only short-term answer appears to be a plan to manufacture a less-powerful version of the Proton booster to lower costs.

In an astonishing recognition of the depth of Russia's space woes, Roscosmos chief Igor Komarov declared earlier this week that the Voronezh factory used sub-standard alloys because of a logistical failure that occurred after a warehouse worker had become ill.

The Khrunichev company that assembles the Proton also has fallen on hard times amid criminal investigations into alleged mismanagement and a decision

to sharply cut its assets. Much of the prized real estate it occupies in western Moscow has been designated for development.

Meanwhile, the development of the Angara, a booster rocket intended to replace both the Soyuz and the Proton, has been repeatedly pushed back, and its future remains uncertain. More expensive and lacking the long-established track record of its predecessors, the Angara probably will find it hard to compete with SpaceX rockets and others in the international market.

Unlike the Cold War era, space research now appears to rank low on the Kremlin's priorities

The first tests of the Angara have been successful, but full-scale production is yet to be organized at a plant in the Siberian city of Omsk.

And while the Soyuz is now the only vehicle for ferrying crews to the ISS following the retirement of the U.S. space shuttle fleet, Russia stands to lose the monopoly soon as the SpaceX's Dragon v2 and Boeing's Starliner

crew capsules are set to fly test missions next year.

Work on a new spacecraft intended to replace the Soyuz crew capsule designed 50 years ago has crawled slowly. The ship, called Federatsiya — Federation — is tentatively set for its first manned flight in 2023, but little is known about its features and functionality.

Roscosmos also has talked about sending several unmanned missions to the moon in the next decade, but details are yet to be worked out. Attempts to send unmanned probes to Mars in 1996 and one of the Martian moons, Phobos, in 2011 failed due to equipment problems.

Russia also has struggled for years to build its own scientific module for the International Space Station. Originally set for 2007, the launch of the Nauka, or Science, module has been pushed back repeatedly, and a 2013 check revealed that its systems had become clogged with residue and required a costly cleaning. The launch is now tentatively set for next year, but some reports suggest it could be delayed further.

Amid funding shortages, Roscosmos has decided to cut the size of its ISS crews from three to two, a move criticized by many in Russia.

"It's very bad when we have to cut the number of cosmonaut seats," cosmonaut Svetlana Savitskaya said in parliament earlier this year. "The situation in our

space industry is quite alarming."

While other space programs faced cutbacks, Russia spent billions of dollars to build the new Vostochny launch pad in the far east as a possible alternative to the Baikonur cosmodrome in Kazakhstan that Moscow has leased from its former Soviet neighbor.

Many questioned the feasibility of the expensive new facility, given the fact that Russia intends to continue using Baikonur for most of its launches.

Work at Vostochny has been dogged by scandals involving protests by unpaid workers and arrests of construction officials accused of embezzlement.

A launchpad for Soyuz finally opened in 2016, but another one for heavier Angara rockets is only set to be completed in late 2021.

Amid massive spending on Vostochny, whose future remains unclear, some have criticized Roscosmos for cutting corners on personnel.

Cosmonaut Maxim Surayev, who now serves as a lawmaker, lamented poor conditions for future space crews at the Star City training center outside Moscow.

"It's wrong when instead of fulfilling their task to prepare for space flight they have to find side jobs and a place to live," Surayev said in parliament.

Several veteran cosmonauts were forced to retire earlier this year amid vicious infighting at Star City. One of the retirees was Gennady Padalka, who holds the world record for the longest time in orbit — 878 days over five space missions.

In a letter released to the media, Padalka urged authorities to fire the director of Star City to prevent the facility from falling into "complete ruin." AP

EPA to ease emission restrictions on coal-fired power plants

By Matthew Daly, Washington

The Trump administration is moving to roll back the centerpiece of President Barack Obama's efforts to slow global warming, seeking to ease restrictions on greenhouse gas emissions from coal-fired power plants.

In a plan expected to be made public in coming days, the Environmental Protection Agency declared the Obama-era rule exceeded federal law by setting emissions standards that power plants could not reasonably meet. The Associated Press obtained a copy of the 43-page document, which underscored President Donald Trump's bid to revive the struggling coal industry.

The EPA's new proposal would make good on Trump's campaign pledge to unravel Obama's efforts to curb global warming and follows Trump's promise to pull the United States out of the landmark Paris climate agreement. Nearly 200 countries have committed to combat global warming by reducing carbon dioxide and other greenhouse gases that contribute to global warming.

The EPA won't prescribe an immediate replacement to the plan, but will seek public comment on whether to curb climate-warming emissions from coal and natural gas power plants.

A spokeswoman for EPA Administrator Scott Pruitt declined to

AP PHOTO



comment Friday on the authenticity of the leaked document but said the Obama administration "pushed the bounds of their authority so far" that the U.S. Supreme Court issued a stay to prevent the Clean Power Plan from taking effect.

"Any replacement rule that the Trump administration proposes will be done carefully and properly within the confines of the law," EPA spokeswoman Liz Bowman said.

The Obama administration's cost-benefits analysis of the Clean Power Plan was "highly uncertain" in multiple areas, Bowman said, vowing that the Trump administration will present a range of scenarios to the public "in a robust, open and

transparent way."

Obama's plan was designed to cut U.S. carbon dioxide emissions to 32 percent below 2005 levels by 2030. The rule dictated specific emission targets for states based on power-plant emissions and gave officials broad latitude to decide how to achieve reductions.

The Supreme Court put the plan on hold last year following a legal challenge by industry and coal-friendly states.

Even so, the plan has been a factor in a wave of retirements of coal-fired plants, which also are being squeezed by lower costs for natural gas and renewable power and state mandates promoting energy conservation.

Repealing the Clean Power Plan

without a timeline or a commitment to propose a rule to reduce carbon pollution "isn't a step forward, it's a wholesale retreat from EPA's legal, scientific and moral obligation to address the threats of climate change," said former EPA Administrator Gina McCarthy.

While the Supreme Court has concluded that EPA is obligated to regulate greenhouse gases, "this administration has no intention of following the law," said McCarthy, who led the EPA when the Clean Power Plan was completed. "They are denying it just as they are denying the science. They're using stall tactics to defer action, ignoring the courts and the demands of the American people."

Industry groups cheered the planned repeal, saying it would reverse regulatory overreach by Obama and McCarthy.

"The Clean Power Plan represented an unlawful attempt to transform the nation's power grid [...] and raise costs on American consumers," said Hal Quinn, president and CEO of the National Mining Association.

The Obama-era plan would have sharply reduced the number of coal-fired plants, making the grid more vulnerable to reliability concerns and increasing costs with "trivial environmental benefits," Quinn said.

The new plan will save an estimated 240 million tons of annual coal production and safeguard more than 27,000 mining jobs and almost 100,000 additional jobs throughout the supply chain, he said.

In the leaked document, the Trump administration argues that repealing the Clean Power Plan could spare an estimated \$33 billion in compliance costs in 2030, arguing that the Obama administration overstated the rule's potential health benefits.

Previously, the EPA had estimated that by 2030 the Clean Power Plan would prevent 90,000 asthma attacks and up to 3,600 premature deaths a year.

The leaked document casts doubts on those numbers and says the EPA plans to perform updated modeling and analysis of health benefits and other impacts of the rule.

Liz Perera, climate policy director for the Sierra Club, said repealing the Clean Power Plan "is about one thing and one thing only: helping corporate polluters profit." AP

ASK THE VET



by Dr Ruan Du Toit Bester

ANÆSTHESIA RISKS IN DOGS

If your pet has to undergo surgery or any medical procedure that requires anaesthesia, you need to be aware of several anaesthesia risks that may arise. While anaesthesia inhibits the pain that the dog would experience during surgery, it has certain side effects that range from mild to severe.

Administration of Anaesthesia

There are different types of anaesthesia protocols that are administered to pets. The type of anaesthesia that's required by the dog depends on the complexity of the surgery being performed, the pet owner's financial capability and the overall health of the pet. Pet anaesthesia is also categorised into different stages and further subdivided into planes.

Although the mortality rate associated with anaesthesia is quite low, pet owners need to thoroughly understand the type of surgical procedure that the dog has to undergo and weigh the risks of not performing the surgery with the risks of administering anesthesia.

Risks of Administering Anesthesia

When administered properly, anesthesia can help the vet successfully complete any type of surgical/medical procedure. Stage-1 and

stage-2 anesthesia are generally preferred for surgical procedures. But if the anesthesia is very strong or if the dog's body reacts negatively, stage-3 anesthesia sets in. This stage of anesthesia is characterized by respiratory problems and the inability to use the chest muscles.

Pets in stage-3 anesthesia require supportive care in terms of IV fluids and oxygen therapy or assisted ventilation. If the pet doesn't recover from stage-3 anesthesia, he may advance to stage-4. If this is the case, the pet may suffer from circulatory collapse and death.

Complications Involved

If the dog is suffering from an underlying heart or liver problem (which is especially true for geriatric pets), the vet will have to carefully evaluate the pet's risk of undergoing surgery under anaesthesia. Most vets will pre-screen the pet for health problems. Blood tests are highly important as they help the vet make a final decision.

Older pets require special anesthesia protocols as they're more susceptible to respiratory depression. Geriatric pets will also have lower body temperatures and low heart beats. After taking all factors into consideration, the vet will have to select the safest drug available for



use in pets.

Tips for Pet Owners:

- If your dog requires anaesthesia, consider working with a certified vet in Macau who is very knowledgeable about anaesthetic procedures.
- Find out the cost involved. If you can't afford an expensive anesthetic drug, the vet may offer you a cheaper option. Make sure that the cheaper option doesn't compromise on the pet's safety.
- Find out how long the pet will take to come back to consciousness.
- Weigh the pros and cons of administering anesthesia by discussing the same with the vet.

Since every pet is different, the risk of adverse reactions or complications varies. Find out how your pet is likely to respond to the anes-

thesia and the surgery.

If the dog is ill on the day of the surgery, re-schedule the surgery for another day. It's best to avoid any risks.

Since your dog relies on you for help, it's important for you to find out all you can about the type of anaesthesia that will be administered, the risks involved, and the success rate of the surgery that needs to be performed.

Hope this info helps
Till next week
Dr Ruan

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