

Problématique : TWE does a balanced education prepare students to address future challenges?	Doc 1	Doc 2	Doc 3	Doc 4
Intro	Maths A-level Exam Graph (2024) Guardian (Aug 2024) Data - factual	Forbes Article (Jin Chow Oct 2023) Opinion piece – personal account / experience + data	Harvard Crimson Article (Charlotte Rediker) opinion piece – student point of view	NPR Interview (Carnevale & Hrabowski) with specialists: education and workforce university professors
Part 1 Unbalance and inequalities	Current educational trends increase imbalance and limit student choice. Gender gap. - with men disproportionately represented in STEM fields. → imbalance can reinforce gendered occupational segregation. - Rising maths A-level entries signal a societal trend toward STEM subjects. - Students feel pressured to choose technical subjects for career security. Result: a narrowing of educational focus, reducing the exposure to a broad range of disciplines. → A social inequality in subject value If maths/STEM are seen as the only “safe” choices, students from disadvantaged backgrounds may feel forced into narrow paths rather than pursuing a broad, balanced education.	Social and psychological imbalance in how disciplines are valued. Perceived hierarchy between disciplines - Many students abandon humanities despite passion, fearing lower job prospects. - Humanities students feel inferior or “irresponsible.” - STEM is seen as inherently more valuable, reinforcing social perceptions of inequality. Outcome: students are not encouraged to pursue a balanced education, and “soft” skills from humanities risk being undervalued. → Social and economic inequality reinforced : students feel obliged to choose STEM for security.	Institutional imbalance in higher education - STEM students must study humanities, but humanities/social science students take minimal STEM. → This educational asymmetry means that many students lack key competencies (scientific literacy or ethical awareness), limiting their ability to face complex future challenges such as AI regulation or climate policy. Inequality is institutionalized: the system favors STEM knowledge, leaving non-STEM students less equipped for future challenges.	Socioeconomic dimension and broader inequality - Narrowly vocational education disproportionately affects lower-income and minority students. - Upper-income students can afford a general, balanced education. → This reproduces educational and social inequalities , preventing equal access to the balanced education needed for adaptability and long-term development. - Technical training without humanities creates professionals lacking empathy, teamwork, and “soft skills,” limiting long-term adaptability.

Part 2 Debunking myths	Relevance to educational trends + Overemphasis on maths and STEM reflects a societal bias + gender stereotypes -Women are less represented due to lack of representation / role models and stereotypes Surge in maths A-levels reflects the narrative that STEM is the only secure path. → But this growth may also be driven by the misconception that humanities are “useless,” a belief debunked by Doc 2.	Humanities vs STEM earnings and skills The myth that “STEM majors are inherently more valuable” is challenged. -Data shows STEM salaries are higher at first, but humanities catch up by age 40. Humanities graduates develop durable skills like critical thinking, problem-solving, and leadership.	Need for STEM in humanities - Integration of STEM into humanities is not about earning potential but about equipping students with the tools to critically assess technology, bioethics, AI, and climate issues. - Humanities are not “useless” or irrelevant —they require complementary STEM knowledge to address complex societal challenges.	STEM without humanities is incomplete - Technical training alone produces professionals who may lack empathy, teamwork, and human-centered thinking. - Myth debunked: STEM is insufficient for producing fully capable, adaptable individuals; humanities enrich STEM with essential soft skills.
Part 3 Future challenges: education as a bridge	Trends show the importance of encouraging balance early for both boys and girls Early exposure to a variety of disciplines, rather than early specialization, can prevent narrow career paths and reinforce adaptability. Schools need to ensure that rising STEM popularity does not limit broader educational development. → without equal emphasis on humanities, this remains incomplete.	Soft skills for leadership and long-term career success Humanities foster transferable skills (adaptability, communication, problem-solving) that remain valuable even when technical skills become obsolete and crucial in fast-changing environments. Balanced education ensures students are prepared for career evolution and unexpected future challenges. → These skills help students navigate future uncertainty.	Humanities students need STEM for societal engagement To regulate AI, address climate change, or make informed policy, future leaders must understand scientific principles <i>and</i> ethical implications. → Balanced education acts as a bridge between technology and society. Balanced education would ensure all graduates can analyse both scientific and social implications of major issues.	STEM students need humanities for empathy and adaptability Professionals require human-centered skills, teamwork, and ethical reasoning. Future workers need both technical skills and “human” skills such as empathy, teamwork, and cultural awareness. Hrabowski: even “techies” must learn the arts to understand human expression and perspective. → Complex future problems require cross-disciplinary thinkers.

To what extent does a balanced education prepare students to address future challenges?

A balanced education that integrates STEM and the humanities is increasingly vital as society confronts complex technological, environmental, and ethical issues. Current systems show gaps: a *Guardian* chart reveals an A-Level bias toward maths in 2024, along with a significant gender divide, suggesting limited intellectual breadth. Jin Yun Chow (Forbes) argues that humanities degrees cultivate critical thinking, communication, and leadership that lead to long-term career strengths. Charlotte R. Rediker (The Harvard Crimson) adds that humanities students also need STEM literacy to engage with debates on technology, climate, and bioethics. NPR's interview of Anthony Carnevale further notes that STEM students gain empathy, ethical awareness, and collaboration skills from the humanities. Together, these views ask: how well does a balanced education equip students for the future?

One key concern is imbalance and inequality in education. The chart from *The Guardian* demonstrates the overwhelming dominance of maths at A-Level, and highlights a gender disparity, with men overrepresented. This trend risks reinforcing gendered occupational pathways and limiting women's access to certain careers. Chow adds that students often feel pressured to choose STEM subjects for financial security, reflecting a perceived hierarchy among disciplines. Yet such a narrow emphasis may produce technically skilled students who lack creativity, adaptability, or social awareness. Carnevale argues that this outcome could harm the US economy, and an unbalanced education reinforces existing educational and social inequalities.

Another key point is debunking the myth that STEM education is superior. Chow supports this by noting that although STEM graduates often earn more initially, humanities graduates catch up by mid-career because of their transferable skills like problem-solving, communication, and leadership. Moreover, Carnevale and Hrabowski emphasize that STEM students need humanities education to foster ethical reasoning, empathy, and teamwork. These perspectives suggest that no single discipline can fully prepare students; a balanced approach equips them with the tools to navigate a complex, interconnected world.

Finally, education can serve as a bridge to future challenges. Carnevale and Hrabowski stress that humanities skills help STEM students apply technical knowledge responsibly and ethically. Chow similarly demonstrates that combining technical and soft skills improves adaptability and career resilience. Approaching the issue from the opposite direction, Rediker explains that STEM literacy enables humanities students to address issues like artificial intelligence, climate change, or bioengineering, as they may one day need to make decisions about these complex challenges in future leadership roles.

In conclusion, cultivating both technical and human-centered skills helps students, regardless of background of gender, to succeed professionally, contribute to society, and navigate an increasingly complex world. Achieving this, however, requires structural changes to the education system driven by political and societal commitment.

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