PC* **Synthèse à l'oral – Dossier n°2**

Colle Q 7 Semaine du 13 janvier

Type Centrale

Rédiger en anglais et en 500 mots une synthèse des documents proposés, qui devra obligatoirement comporter un titre. Indiquer avec précision, à la fin du travail, le nombre de mots utilisés (titre inclus), un écart de 10% en plus ou en moins sera accepté.

Ce sujet comporte les 4 documents suivants :

— Un graphique illustrant un article du cabinet de conseil Boston Consulting Group publié en 2015
— Une tribune d'une contributrice au journal de l'université de Stanford, The Stanford Daily, parue en janvier 2022
— un essai publie dans *The Economist*, paru en mars 2023
— un article publié par The Diplomatic Courier en février 2023

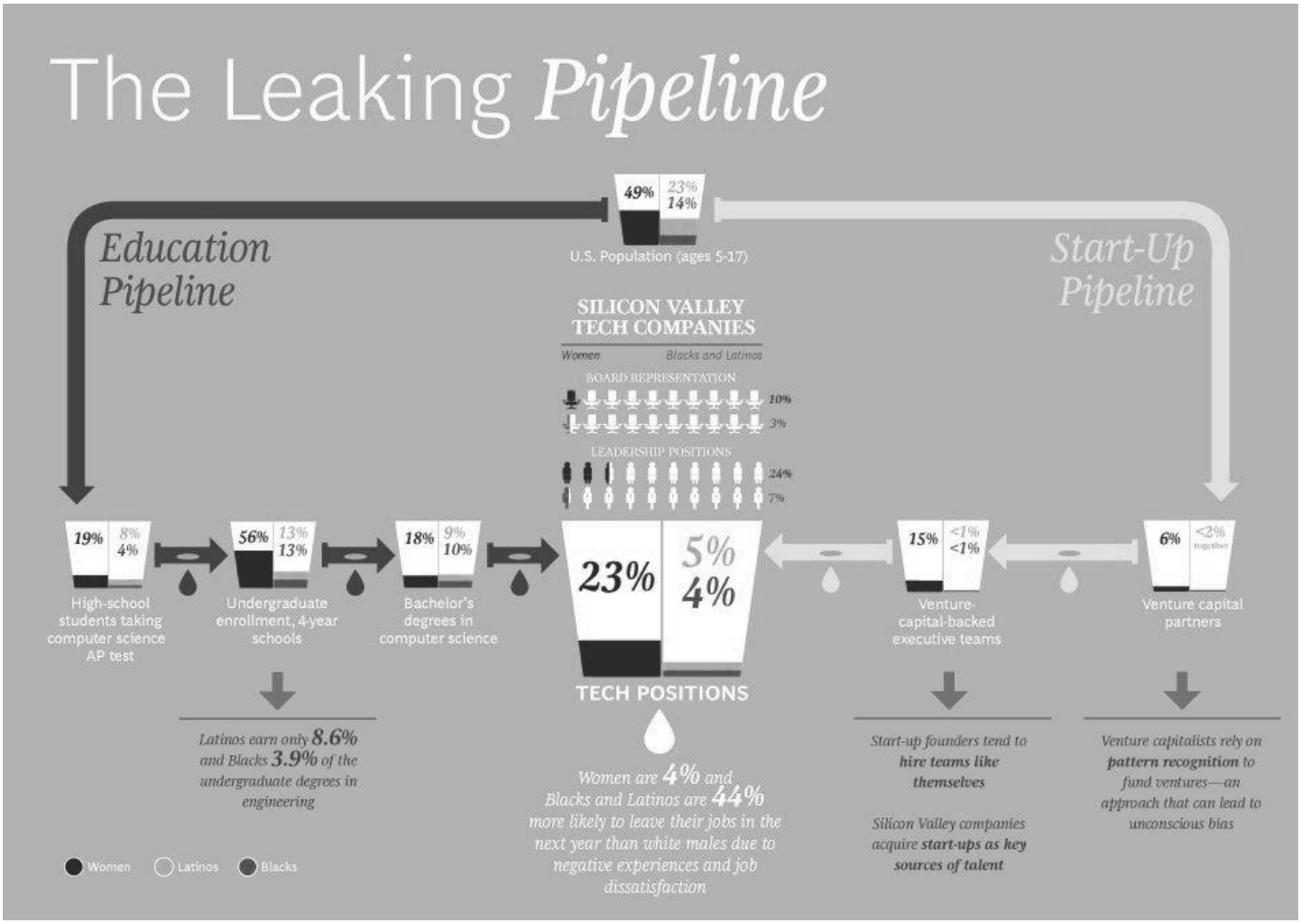
L'ordre dans lequel se présentent les documents est arbitraire et ne revêt aucune signification particulière.

ATTENTION - NE PAS TENIR COMPTE DU DOC 5 POUR LA SYNTHESE

TEXTE D'OPINION

En réagissant aux arguments exprimés dans cet éditorial (document numéroté 5), le candidat rédigera lui-même dans la langue choisie un texte d'opinion d'une longueur de 500 à 600 mots.

A - DOCUMENT 1



Closing the Diversity Gap in Silicon Valley, Boston Consulting Group, 2015

A- DOCUMENT 2

I never forget my gender as a woman in STEM: Industry

Opinion by Rebecca Wang, *The Standford Daily,* Jan. 26, 2022

Rebecca Wang is a graduate student studying aeronautical & astronautical engineering

a graduate student studying in STEM fields, the gender disparity in STEM is not new to me. Even as an undergraduate, I had been used to seeing more men in a room than women. The undergraduate class of engineers in my major started out with approximately 18% female enrollment, and at the end of four years reported 21.2% female graduates. In graduate school, my incoming engineering major class was 20% female. Even so, I still found myself seemingly able to cope and overcome the difficulties of this gender imbalance within the classroom.

Unfortunately, my immunity was short-lived. During an engineering internship at a space technology company last summer, at the first staff meeting of my team, I was the only woman in the room (out of roughly 27 engineers). With a single-digit percentage of women, such a clear gender imbalance left me feeling as though I didn't belong. This feeling only worsened as the internship continued. In the first few days of the internship, I sat in the main building where I saw a handful more women. But over the next week and month, as I was moved to the production floor and, eventually, to the new office built to house roughly 100 engineers, I could count all the full-time female engineers there on one hand. (…)

But where do the women go? What experiences do we all collectively face, as an already scant group, in our transition from academia to industry? After all, our training in school ultimately aims to prepare us for the workplace. Is it our own choice, or external factors influencing this choice, that leads women to disappear? Is our choice really even *our* choice?

In 2015, a study out of the University of Vermont reiterated that, although some suggest women choose not to pursue careers in STEM because of a lack of interest, extensive evidence indicates that women are socialized away from STEM; in other words, sexism makes it difficult for women to pursue their careers of interest. Lower

salaries compared to those of men in similar roles, fewer advancement prospects and family matters are common reasons — but with the lack of representation and its impact on the treatment of women, women increasingly choose to exit their STEM careers, while some join non-STEM fields from the beginning.

I wasn't surprised by the conclusions of these studies. In school, being different was solvable; at work, being different was paralyzing. In addition to worse gender statistics in the workplace, an added factor was that success in the classroom usually meant a good letter grade, produced from (mostly) objective evaluation — homework, quizzes, exams — and was relatively low stakes. As you get older, however, your academic successes hold much less influence over your professional successes. This is not the case at work, when factors affecting your livelihood are muddied by subjectivity and the biases of how your managers view your potential.

The production floor at my internship was relatively gender-homogeneous, and I often felt out of character. And for the first time in my life, this subjective, "out of place" feeling had the potential to influence my performance, my success and my livelihood. When I joined in on my male desk-mates' banter — a subtle currency that afforded you better seats in the professional hierarchy at the workplace — I was entirely confused about how I was supposed to be treated there: Should I have accepted different treatment because I was fundamentally different, even if it was to my benefit? Or should I have demanded indifference, and strived to get any credit by establishing that I could do a "man's job"? (…)

After experiencing firsthand the sheer amount of male domination in industry, I couldn't help but feel a desire to leave the field. In my second year of graduate school, I still needed more senior and successful female STEM professional role models. To stay and battle centuries' worth of disadvantages seemed a dismal prospect from the standpoint of my novice career. To exit STEM and be considered as "adding to the problem", or to stay and suffer the unequal treatment — there was no choice I could make to win. Such a quandary begs the question: What can our society do to effectively increase the number of women in STEM fields, despite statistics that continue to reflect the problem of unequal representation, even as companies and institutions modify internal policies? We need the answer now more than ever. 738 words

A – DOCUMENT 3

By invitation - Ginni Rometty on how to ensure more women work in tech

The Economist, Mar 8th 2023

WOMEN CONTINUE to suffer from economic and employment inequalities. Globally, they make just 77 cents on average for every dollar earned by men and hold only two in every ten science, engineering and communication-technology jobs. Gender pay gaps and the dearth of women in higher-paying jobs in these fast-growing industries reduce women's financial stability. This makes it harder for them either to support themselves and their families, and to save for the future.

Such problems can be alleviated if more women have access to high-paying occupations in science, technology, engineering and mathematics (STEM). Ensuring more women get these jobs means not only paying women fairly, but also changing current notions about how we prepare people for the modern workforce and how companies recruit employees.

I know how both an education and a career in technology and engineering can advance a woman's prospects. I grew up in a family of little financial means. As a student I enjoyed mathematics and was the first in my family to complete a four-year college degree. I chose to study engineering—often as the only woman in my classes—because it taught me how to solve problems with logic and ingenuity. It also earned me a scholarship from General Motors, the carmaker. My bachelor's degree in computer sciences helped me get an entry-level job as a systems engineer at IBM in 1981. In 2012 I became the company's first female chief executive.

My experiences showed me practical steps that educators and employers can take to increase women's access to the best jobs in some of the most exciting and lucrative fields. These ideas are not all gender-specific, but increasing opportunities for all underrepresented people will inevitably benefit women.

A quick way employers can expand economic opportunity for women is to drop four-year degree requirements for some entry-level positions and instead evaluate candidates' skills and aptitude. According to the National Centre of Education Statistics, just one-third or so of students graduating in STEM subjects in America in 2020 were women. Many of today's tech roles require skills that can be acquired without a university degree, but some employers still demand the academic credential. This "degree inflation" trend, prevalent over the past two decades in America in particular, puts up false barriers to employment in most developed countries for the 60% of people

who do not have four-year degrees. Hiring for skills instead opens the workforce to marginalised workers, including women, and allows open positions to be filled more quickly. (…)

In 2012 IBM couldn't find enough applicants to fill cyber-security roles and we realised that our degree requirements filtered out some qualified candidates. At the time less than 10% of all IBM jobs were open to those without degrees. Our recruiters rewrote many cyber-security job descriptions to outline the skills needed for each position, including proficiency in different coding languages, as well as creativity and project management. We also stopped requiring a degree.

The revisions were so effective that we expanded them to other roles and began recruiting more people who had never attended college—including many women. By 2019, IBM saw a 63% increase in candidates from underrepresented groups applying for positions that no longer required a degree. That year about 15% of all our American hires did not have a four-year degree. Now IBM has removed bachelor's degrees from job postings altogether unless the role absolutely requires it.

As firms place more emphasis in hiring on skills rather than academic credentials, young people will require more options than a four-year university degree to develop the capabilities that employers need. We developed one such option during my tenure at IBM by co-founding a new programme to teach tech skills to high-school students. The Pathways in Technology Early College High School (P-TECH) lets them earn a high-school diploma and an associate degree in applied science in six years. It began in New York in 2011 and has since expanded globally. (…)

The third way to make tech education and careers more accessible is through apprenticeships. America has lagged behind European countries, particularly Germany and Switzerland, in adopting apprenticeships for non-trade jobs, partly because of the country's misplaced bias towards college as the best path for economic mobility. (…)

During my time at IBM, our P-TECH programme and changes to our recruitment process brought more diversity, including more women, into our workforce. Other companies should follow suit (…). Giving everyone equal access to education and employment opportunities also promotes women's economic security and so will help societies flourish. When it comes to science and tech careers, women must not be discouraged, overlooked or derailed. They must also be paid equally. Teaching, hiring and advancing women benefits us all. ■ (782 words)

Ginni Rometty was the CEO of IBM between 2012 and 2020. She is the co-founder of OneTen, a network that aims to advance career opportunities for black Americans, and the author of "Good Power: Leading Positive Change in Our Lives, Work, and World" (2023).

A- DOCUMENT 4

Women Are Shunning STEM, That Has to Change

BY Lara Zwittlinger, Amy Kardel and Horacio Alejandro Reyes Leon
***The Diplomatic Courier,* February 10, 2023**

After decades of disadvantaged access to education, women today typically outperform men in educational outcomes. Girls get better grades in equally demanding classes and are even more likely to complete tertiary education. Despite the trends, the phenomenon of horizontal gender segregation—the tendency of women and men to sort themselves into different occupational areas by gender—persists. The underrepresentation of women in science, technology, engineering, and mathematics (STEM) remains particularly striking.

In 2020, the average share of women enrolling in STEM undergraduate degrees was only about 31% across OECD countries, while the share of female enrollment in information, communication, and technology programs (ICT) was even lower, at around 20%. Until the early 2000s, was been wrongfully argued that by nature, women possess less mathematical ability, thus rarely pursue math-intensive careers. Yet gender differences in mathematical performance and standardized test scores have narrowed or even disappeared in many countries, making this assumption untrue. This calls for reflection on the socio-psychological traits for the persisting gender gap in STEM. In fact, it could be argued that math skills are not even necessary for many ICT roles.

Why should we care about that? Horizontal gender segregation impacts the gender pay gap—which is aggravated when women are underrepresented in high-paying STEM jobs. According to Bureau of Labor

Statistics' earnings data, 63% and 61% of all tech jobs pay above median salaries for men and women, respectively.

The pay gap is exacerbated by lower retention rates for women. Without addressing the retention issue to ensure under-represented workers progress to senior management-level positions this will persist. A further rationale is the already short supply of STEM professionals, with this shortage continuing to grow in the tech-hungry post-industrial world. Attracting traditionally underrepresented groups—such as women—for STEM careers is crucial to meet the needs of the labor market. In addition, reducing gender gaps in STEM careers stimulates economic growth and higher employment rates.

Perhaps most importantly, the lack of diversity in STEM limits the quality of innovations due to lack of different perspectives. Many products (including medicine and hardware) have been exclusively developed by and tested on men, which makes them less useful or safe to use for women.

Depictions usually associated with people in STEM, are far from what most teenage girls would like to be compared with, especially if our society demands a feminine, glamorous, and fashionable woman as a cultural standard. Science and mathematics seem to be culturally associated with masculinity, thus it is no surprise that adolescent girls often think they do not have what it takes to pursue a STEM career. Furthermore, evidence shows that holding stereotypical beliefs about women in math is associated with perceiving other females with high math scores to be less feminine, less attractive, and less likable. (…)

A further strand of research found that these gender-math stereotypes impair females' performance and performance-related beliefs by activating the fear of potentially confirming these negative stereotypes. (….)

Finally, given the influence of these societal norms, it is not surprising that girls focus their efforts and interests on subjects where their participation is more valued and encouraged, such as languages and humanities. Consequently, females show a relative strength, i.e., better performance compared to their own performance in other subjects, in reading and language subjects, while male students show a relative strength in math and science in most countries. Since students might choose their career based on their own relative, not their absolute strengths, this may explain why less females end up choosing STEM careers.

Having reviewed some of the existing explanations for females' underrepresentation in STEM, we purpose the following actions:

- **Challenge the gender-math stereotype**: Connecting STEM to positive encouragement, female roles, and real-world examples cultivates a healthy curiosity of the field for girls. It's not necessarily about making tech "cool," but we must acknowledge there are negative perceptions of working in tech.
- **Create safe spaces for girls**: Mentoring and supportive learning environments both at home and at school are crucial to encourage more girls for a career in STEM. Certain gender-specific initiatives, such as gender-separate STEM classes or extracurricular activities such as girls' STEM clubs are worth considering.
- **Challenge the idea of the trade-off between language and STEM skills**: Combining language and STEM education may raise girls' interest in STEM while also challenging the idea that STEM jobs exclusively require numerical abilities and do not allow room for creativity. 731 words

The Diplomatic Courier *is an English-language global news and international affairs analysis magazine based in Washington, D.C. It publishes six print issues per year. Its focus is on developments in diplomacy, conflict resolution, international affairs, and rule of law, as well as concepts and theories from a wide variety of related disciplines*

B – DOCUMENT 5

Guest Essay - The Most Common Graduation Advice Tends to Backfire

The New York Times, May 22, 2023, **By Sapna Cheryan and Therese Anne Mortejo**

Dr. Cheryan is a research psychologist who runs a lab that studies stereotypes and social inequities. Ms. Mortejo is an undergraduate who works in Dr. Cheryan's lab.

As American high school and college students graduate and embark on the next phases of their lives, one piece of advice they will undoubtedly receive is to follow their passions or some equivalent sentiment. It seems like fine guidance, however clichéd: Do something that feels true to yourself rather than conform to expectations.

But following your passions often turns out to be a bad idea. New research that we and our colleagues conducted found that when asked to identify their passions, women and men tend to cite stereotypically feminine and masculine interests and behavior. Women are more likely to say they want to make art or help people, for instance, while men are more likely to say they want to do science or play sports.

In other words, when asked to identify their passions, people seem to do precisely what following their passions is supposed to discourage: They conform to societal expectations. This finding is especially troubling for anyone concerned about gender disparities in fields like computer science and engineering, in which women are significantly underrepresented.

In two surveys — one of more than 500 undergraduates nationally and the other of about 150 undergraduates at the University of Washington who had recently declared their majors — we found that "follow your passions" was the most common advice American college students heard and used when selecting their majors.

Then we asked hundreds of undergraduate students which majors and careers they would choose if they followed their passions and which majors and careers they would choose if they prioritized salary and job security. We found that when it came to pursuing male-dominated fields like computer science and engineering, gender gaps were greater when students chose to follow their passions, with men disproportionately choosing those fields. We also found that gender gaps in selecting future occupations were smaller when we asked people of both genders to prioritize nurturing and emotionally supporting other people.[...]

Are we suggesting that women shouldn't pursue their passions and should enter fields that they don't really care about just to close gender gaps? Of course not. For one thing, traditionally feminine work is important, and society needs people who are passionate about it and want to pursue it — including men. [...]

In many non-Western countries, students are not encouraged to view academic choice as a form of self-expression. The results can be striking: In countries such as Malaysia and Kuwait, the gender disparities in computer science and engineering degrees are much smaller than they are in the United States. Students in those countries typically pick their majors for other reasons — income, job security, family obligation.

The "follow your passions" advice may appear to ask people what they want to do with their lives. But too often what they're being asked to do is let their gender limit their choices. So let's change what we say to high school and college graduates. Sure, you can follow your passions. But also keep an open mind and try things you may have ruled out without even realizing why. There may be more to be passionate about than you realize.