

The Power of a Diverse Team: A Reflection on Cognitive Diversity

Introduction

As a Drama teacher, I have been able to appreciate the benefits of collaborative work throughout my career. Theatre, as with many other art forms, is inherently collective, relying on actors, directors, designers and technicians working together to bring a shared vision to life. But it wasn't until I expanded my knowledge of diversity and inclusion that I began to see collaboration and teamwork through a new lens; recognising not just the inherent benefits of teamwork, but the opportunities (and fruitful challenges) that diverse perspectives offer. This led me to reflect more intentionally on how different ways of thinking fuel creativity and innovation, solve problems and achieve deeper engagement within a group. As Bart Wielenga argued in his thoughts about character education, schools exist not just to help pupils achieve good grades but to prepare young people for the complexities of the world they will enter.

Reading Matthew Syed's *Rebel Ideas* helped me realise that cultivating cognitive diversity – the integration of different perspectives – prepares pupils not only for the challenges of adulthood but also for making a meaningful impact in the world.

The Educational Value of Teamwork

But first, I will start with teamwork. Collaboration in schools is often framed in terms of academic achievement, and rightly so. Studies have shown that pupils in collaborative learning environments often achieve better academic outcomes, an average of five months' additional progress (Foundation, 2021). Beyond this, the social aspect of group work makes learning more rewarding for vulnerable pupils, fostering inclusion and support (Williams, 2024). Working in this way also improves critical thinking skills by 30% and increases retention rates by 25% (Kumar, 2017). However, this is just the measurable impact; the true value of collaboration goes far deeper and that speaks to the vital importance of human connection the thing we missed the most during lockdown.

Teamwork develops essential life skills beyond academics, which is why it features on STEM Learning's top 10 employability skills list (and most CVs). The ability to collaborate effectively is essential not only in professional settings but also in personal relationships, good citizenship and schools. When learners work closely with one another, they learn to compromise, navigate disagreements, refine their ability to articulate ideas and analyse and evaluate different viewpoints before arriving at their own judgement.

I have touched on the benefits of teamwork in developing life skills, but collaboration also enhances academic outcomes. The old adage of the whole being greater than the sum of its parts illustrates the power of a team, as does the analogy of an ant colony where each individual contributes to a larger system. This concept has been around for millennia, but it is becoming increasingly important in the modern world, as Professor Brian Uzzi of Northwestern University, Illinois points out, "The most significant trend in human creativity is the shift from individuals to teams, and the gap between teams and individuals is increasing with time."

Not All Teams Are Equal

In academic research, the percentage of papers with two or more authors rose from 19% in 1960 to 74% in 2018 and these papers tend to have a higher impact. By 2010, a team was three times more likely to produce a highly cited paper than a solo author (Jones, 2021). But not all teams are equally effective; the composition of a team matters just as much as collaboration itself. This is where cognitive diversity becomes critical. Teams that combine diverse perspectives, knowledge and skills, produce more novel and impactful research and are far more innovative than those that think alike – their ‘collective intelligence’ exceeds individual efforts.

Although diverse teams are more effective, they can also create discomfort – whether in a classroom or a workplace. Our instinct is to gravitate toward those who think like us. There is a certain ease in surrounding ourselves with people who share our perspectives, who confirm our ideas and validate our viewpoints. After all, ‘birds of a feather flock together.’ While this familiarity may feel reassuring, it does not necessarily lead to the best outcomes. This idea was explored in a study led by Professor Katherine Phillips at Columbia Business School. Teams were tasked with solving a murder mystery by analysing complex information from alibis, witness statements and suspect lists. One type of team was composed entirely of friends and another composed of three friends and one outsider. Interestingly, teams that included an outsider consistently outperformed those made up of only friends, identifying the correct suspect 75% of the time, compared to only 54% for the all-friends teams. The presence of an outsider brought in a different perspective, forcing the team to consider a wider range of possibilities and avoid ‘groupthink’. However, when asked about their confidence in their answers, the all-friends teams were 50% more likely to express certainty in their choice. They also reported feeling more comfortable and enjoying the activity more than the teams with an outsider (Phillips, 2014). This study highlights an uncomfortable truth – while homogeneity may feel comfortable, it often leads to stagnation rather than discovery.

This has direct implications for education. Pupils often prefer working with those they already know and trust. If they form groups outside their comfort zones, they are encouraged to engage with different viewpoints, question assumptions and challenge their own thinking. Imagine a team of 10. They are all asked to bring 10 different ideas to the table. In a team where the members all think alike, many of those ideas will overlap, leading to repetition rather than innovation, resulting in just 10 ideas, albeit framed in slightly different ways. Now, picture a team of 10 individuals who each approach the problem from a different angle. Suddenly, they have the potential to generate 100 unique ideas, drawing from varied experiences and insights. A team composed of individuals who think the same way is only ever likely to reach one answer (which may or may not be the right one), but a cognitively diverse team is more likely to generate multiple possibilities, deeper analysis and richer discussions.

Beyond problem-solving, cognitive diversity also plays a crucial role in creativity. Studies have shown that in an education setting, encouraging pupils to engage with perspectives outside their own enhances their ability to think critically and develop novel ideas. (Kurtzberg, 2005) This is particularly important as we prepare pupils for careers in an increasingly globalised world, where understanding different cultural viewpoints is

essential. As Matt Radley highlights in his essay on *Supporting Young People in Managing the Online and Offline World*, social media often promotes rapid consumption of information, which discourages deep reflection and critical analysis. This reinforces the importance of actively teaching pupils to engage thoughtfully with diverse viewpoints. Without such skills, young people risk becoming passive consumers of information but by ensuring that they are consistently exposed to multiple perspectives, we can equip them with the tools to challenge assumptions, refine their own viewpoints and navigate complexity with greater flexibility.

Diversity or “Super-Duper”?

There is a misconception that the trade-off between excellence and diversity is a zero-sum equation. The American Supreme Court Judge, Justice Antonin Scalia once argued that prioritising diversity over talent could undermine success, putting it in quite simple terms that there is a choice between diversity or being “super-duper”. The diversity that Justice Scalia was referring to is demographic or identity diversity. However, my thesis in this essay is about cognitive diversity. The two are of course linked – our own backgrounds and characteristics inevitably influence our perspectives. A psychology experiment (Masuda, 2001) explored cultural differences in perception by comparing how American and Japanese participants processed visual information. Participants watched animated vignettes of underwater scenes featuring fish, small animals, plants and rocks and the participants were asked to report what they observed in the scenes. Americans tended to focus on the most prominent objects in the scene, such as the large, brightly coloured fish. While their Japanese counterparts paid more attention to the context and relationships between objects. They were more likely to mention background elements and the interactions between the fish and their environment. This research highlights how cultural backgrounds can shape cognitive processes and the way we perceive and interpret the world around us: Western societies tend to be more individualistic whereas Japanese culture is more interdependent.

While demographic diversity alone does not guarantee cognitive diversity, varied lived experiences influence the way individuals approach problems. Research shows that gender-diverse teams are nearly 10% more likely to produce novel work than same-gender teams (Duncan J. Watts, 2021). Whilst individual excellence is “super-duper” important for linear tasks like winning a race or mathematical calculations, I don’t believe that to be true for the more complex problems that we currently face and our children will continue to face.

German psychologist Karl Duncker introduced the concept of ‘analogical reasoning’, which illustrates how problem-solving can benefit from cross-fertilised thinking. To illustrate his concept, he suggested the following scenario. A doctor needs to destroy a malignant tumour using rays. High-intensity rays can destroy the tumour but also harm healthy tissue. Low-intensity rays are harmless to healthy tissue but ineffective against the tumour. What type of procedure might be used to destroy the tumour with the rays and at the same time avoid destroying the healthy tissue? When I have presented this thought puzzle to teenagers, most cannot find a solution (apart from one who came up with the idea of inserting a tube that would “push aside” any delicate organs and end at the tumour so the rays could sent down the tube - genius!). But the majority are not alone

in not being able to solve it - 90% of people can't. Now consider this analogy: a General needs to capture a fortress surrounded by mines. Large forces trigger the mines, but small groups can pass safely. The General divides her army into small groups that converge on the fortress simultaneously, thereby capturing it. Having read the story of the fortress, more than 70% of people found a way to save the patient. (Loewenstein, Thompson, & Gentner, 1999) This thought puzzle highlights how diverse perspectives and analogical reasoning can lead to innovative solutions. By considering a medical conundrum through a military perspective, it can jog new insights, new metaphors and new solutions. The same principle applies in classrooms, where young people from diverse backgrounds bring unique perspectives that enrich the learning experience for everyone.

The Risks of Sameness, the Rewards of Difference

The consequences of failing to embrace cognitive diversity can be significant. History provides stark examples of where homophily has led to costly blind spots. In his book, Syed explores how the failure to prevent the 9/11 attacks could be attributed to a lack of cognitive diversity within the CIA. It is important to note, that this failure is not attributed to any individual agent who were all experts in their field, but rather to the lack of diverse perspectives in the Agency that meant that critical warning signs were overlooked. In an interview years after the attack, former deputy director of the CIA Carmen Medina stated, "If almost everyone has one worldview, we are not in a position to understand our adversaries and anticipate what they are going to do."

The concept of the 'problem space' in diversity science refers to the range of ideas, perspectives and knowledge relevant to solving a particular problem. A diverse group collectively covers a broader problem space, allowing for more angles and potential solutions, leading to better decision-making and innovation (Syed, Rebel Ideas, 2019). This principle isn't limited to intelligence failures. Cognitive diversity has also proven valuable in the sporting 'field', where diverse perspectives have driven improvements at the highest level. The English Football Association's Technical Advisory Board was established in 2016 after years of disappointing results. The FA deliberately brought in experts from journalism, IT, the military and even rugby rather than exclusively football specialists. This decision was based on the understanding that a fresh perspective was needed to break the cycle of poor performance in tournaments. That decision brought cries from die-hard fans of "where are all the football experts!" but the proof was in the pudding. Whilst it didn't lead to football immediately "coming home" the team came fourth at 2018 World Cup and were runners-up at Euro 2020. The logical is that their new manager, Gareth Southgate WAS the expert in football, that corner of the problem space was covered. What the team needed was diverse thought, not the same thought multiplied.

Avoiding Echo Chambers and Blindspots

This brings me to the subject of echo chambers – environments where only one perspective is reinforced over and over again. As Leonardo da Vinci observed, "All our knowledge has its origins in our perceptions." This insight is as relevant today as it was during the Renaissance. The way we see the world is shaped by our personal experiences,

cultural backgrounds and the information we consume. Without actively seeking alternative viewpoints, we risk reinforcing our own biases rather than expanding our understanding. As Charles List highlights in his analysis of AI and education, there is a danger that algorithm-driven learning could reinforce existing biases rather than challenge them. The same risk applies in human interactions – when we are only exposed to perspectives that mirror our own, we fail to see the full complexity of an issue. This creates blind spots that make it harder to engage with alternative viewpoints (Deutsch, 2016). Cognitive diversity is, therefore, essential for counteracting these blind spots and ensuring that knowledge is enriched, not limited, by perception. This has profound implications for young people, who risk becoming entrenched in narrow ways of thinking if they are not exposed to diverse perspectives. To counter this, expanding educational content to include multiple viewpoints prevents pupils from falling into the trap of only consuming reaffirming content. History lessons, for instance that incorporate diverse perspectives encourage critical thinking. Similarly, discussions around current events should analyse multiple viewpoints rather than reinforcing a single narrative.

Diverse teams do not just produce better results; they also make fewer errors. Homogeneous groups tend to develop what Syed calls ‘collective blindness’ - when everyone in a group has similar experiences and perspectives, they miss the same blind spots. By contrast, cognitive diversity reduces this risk, allowing teams to anticipate problems more effectively and mitigate risks before they become failures.

In Bart Wielenga’s essay character education, he draws from Viktor Frankl’s concept of *‘the last human freedom’* to suggest that pupils who continually choose intellectual safety and ideological comfort risk developing intellectual complacency. If we want to prepare young people for a complex world, we must deliberately create learning environments where they are encouraged to engage with cognitive dissonance, critically evaluate ideas and refine their understanding through challenge rather than confirmation. In this way, avoiding intellectual silos is not just an academic necessity but a fundamental part of character development. The concept of the ‘danger of a single story’ – coined by Nigerian author Chimamanda Ngozi Adichie – highlights how limited narratives can reinforce stereotypes and narrow our understanding of the world (Adichie, 2009).

One of the ways to promote cognitive diversity in education is through curriculum diversification. A more representative curriculum, including literature, history and case studies from different cultures and experiences, fosters a richer learning environment. By ensuring that a range of voices and perspectives are included, we create opportunities for deeper engagement and critical reflection. Learning thrives in environments where voices that might otherwise be overlooked are amplified, allowing pupils to challenge assumptions and broaden their understanding of the world. In our ‘Life Through My Lens’ Chapel series, we encourage pupils to share their individual perspectives. This is particularly effective in breaking down barriers and allowing pupils to see beyond their own lived experiences and develop greater empathy, patience and adaptability.

Moreover, teachers can model cognitive diversity in their own practices. Encouraging young people to question assumptions, engage in debates and explore multiple interpretations fosters critical thinking skills that will serve them throughout their lives. In

all subjects, from arts to sciences and humanities to languages, incorporating perspectives from different time periods, cultures and ideologies challenges young people to think more deeply and avoid the pitfalls of narrow thinking.

Building a Future-Ready Generation

As AI reshapes the world of work, cognitive diversity is more critical than ever. As Charles List laid out in his essay, AI can process information quickly, but the “*humans in the loop*” have a monopoly on ingenuity, adaptability and ethical reasoning. If education focuses solely on content knowledge without fostering diverse perspectives, pupils will be ill-prepared for an evolving job market. Increasingly, employers are recognising the value of employees who can navigate complex, unpredictable situations. The ability to integrate different perspectives, work collaboratively, and challenge assumptions will be among the most sought-after skills in the workforce of the future. The World Economic Forum has identified critical thinking, problem-solving and creativity as the top three skills required in the workforce by 2030 (Forum, 2025) – skills that are directly linked to cognitive diversity.

What is more, cognitive diversity is essential for tackling the global challenges that will define the coming decades. Issues such as climate change, social inequality and technological ethics require solutions that incorporate multiple viewpoints and areas of expertise. Schools can equip young people with the ability to engage with these challenges in a meaningful way, ensuring that they leave education not only knowledgeable but also capable of thinking flexibly and working effectively with others.

Conclusion

Cognitive diversity is not just an asset – it is a necessity. In education, business and society, the ability to think differently, challenge assumptions and engage with diverse perspectives enriches our understanding and drives progress. By fostering environments where varied voices and experiences are valued, we empower young people to navigate an increasingly complex world with confidence and creativity. When we embrace cognitive diversity, we open the door to new ideas, deeper connections and transformative innovation – ensuring that the next generation is not only prepared for the future but ready to shape it.

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