# Paths to Resilience:

How Passion Projects, Positive Storytelling and Portfolios Can Support Student Mental Health

**White paper by Polygence.org**

# INTRODUCTION
The state of the youth mental health crisis

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# KEY TAKEAWAYS

**#1**

Young people are experiencing an ongoing crisis of mental health.

**#2**

Telling positive stories about ourselves is a proven way to combat emotional challenges and develop resilience.

**#3**

Practicing self reflection by writing essays or building portfolios can help students find meaning beyond their academic achievements.
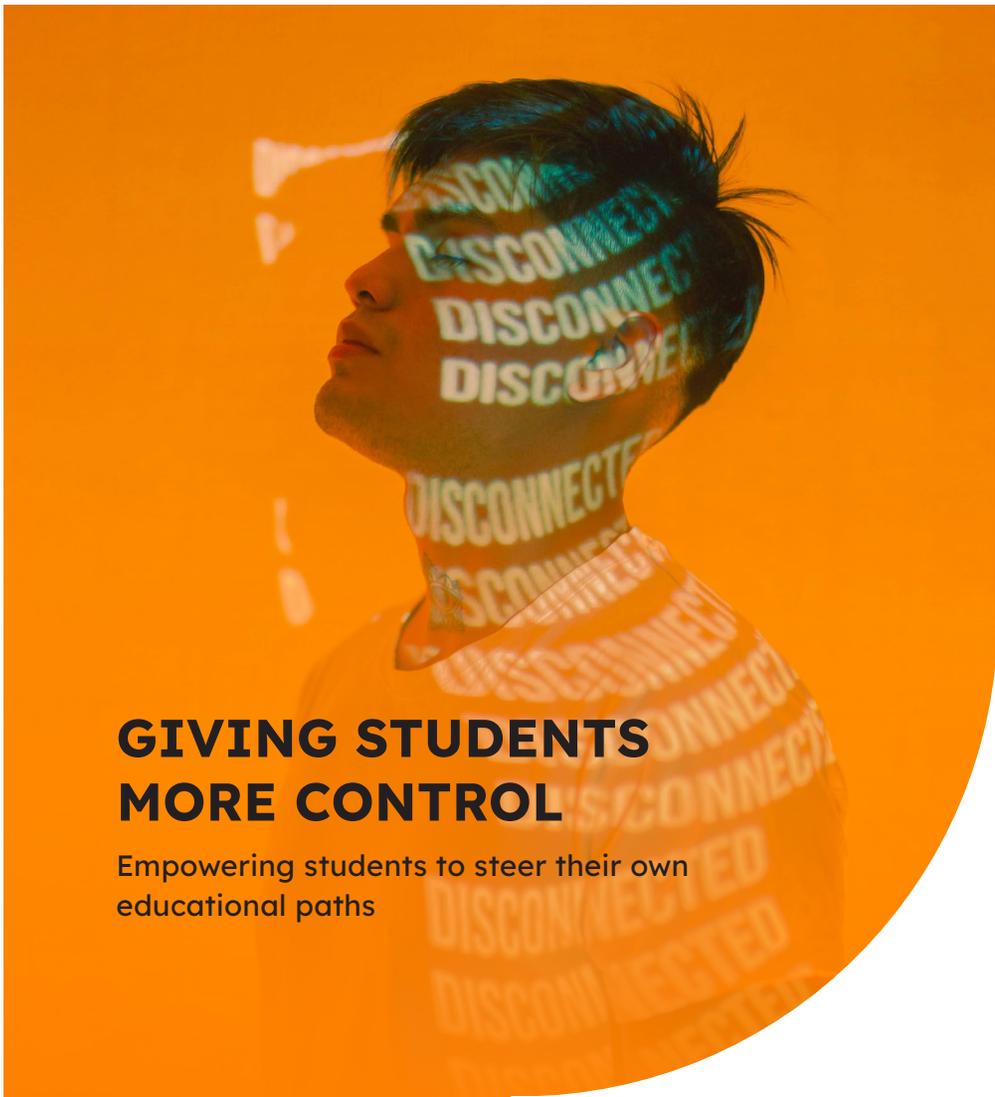
## GIVING STUDENTS MORE CONTROL

Empowering students to steer their own educational paths

**WRITTEN BY**
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PhD

# INTRODUCTION

In January 2020, researchers from Yale University published an alarming report about the mental state of US secondary students.

The nationwide survey of 21,768 high schoolers from Yale's Center for Emotional Intelligence and the Child Study Center discovered a large majority–nearly 75%–had negative feelings about their time at school.[1] "It was higher than we expected," said co-author and research scientist Zorana Ivcevic about the results. "We know from talking to students that they are feeling tired, stressed, and bored, but were surprised by how overwhelming it was."[2]

**PATHS TO RESILIENCE:** HOW PASSION PROJECTS, PORTFOLIOS AND POSITIVE STORYTELLING CAN SUPPORT STUDENT MENTAL HEALTH

In hindsight, these findings may seem trivial next to the emotional and physical impact of Covid-19, which warped the entire world in the following months and years. The public health effects continue to be dizzying, but students have suffered acutely. In October 2021, alarmed by "soaring rates of mental health challenges among children, adolescents, and their families," the American Academy of Pediatrics, American Academy of Child and Adolescent Psychiatry and Children's Hospital Association jointly declared a "state of national emergency."[3]

And yet as coronavirus closures ebb more than two years later and something resembling pre-pandemic school returns, stress, anxiety, and depression still affect secondary students at epidemic levels.[4] Things did not improve in 2022. A New York Times survey of school counselors across the country this spring found that nearly all of them (94%) reported that students were showing more signs of anxiety and depression than before the pandemic.[5]

Yet while student stressors have worsened over the past few years, the root causes of them clearly run deeper than covid and remote schooling. The rise in stress correlates with steadily decreasing acceptance rates at top schools. In

2011, a student applying to Ivies might have considered the University of Chicago a safety school with a 34.9% acceptance rate; its admission rate last year was 6%.

The pressure to gain acceptance to a good college can turn academic life toxic; students from high-achieving schools "suffer from symptoms of clinical depression at rates three to seven times higher than normal".[6] For their part, schools, districts, and colleges have grasped the urgent need for increased counseling support and mental health resources. However, staffing shortages often force them to triage students in crisis before attending to subclinical individuals who need more modest interventions.[7] Which leaves us to ask: What can be done on a pedagogical level to address these issues? What changes to the structure or goals of academic work could make students more resilient and fulfilled?

In **our white paper analyzing Harvard admissions data,** we established how research and passion projects enhance college applications.[8] We now turn our attention to the personal and psychological values of such work, namely how engaging in creative projects can have a tangible impact on student learning, a sense of control over their own future, and emotional well-being.

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## WHAT CHANGES TO THE STRUCTURE OR GOALS OF ACADEMIC WORK COULD MAKE STUDENTS MORE RESILIENT AND FULFILLED?

# GIVING STUDENTS MORE CONTROL

**HOW CAN STUDENTS PUT THEIR BEST FOOT FORWARD WHEN THE GROUNDS FOR JUDGMENT ARE THEMSELVES UNSTABLE?**

**PATHS TO RESILIENCE:** HOW PASSION PROJECTS, PORTFOLIOS AND POSITIVE STORYTELLING CAN SUPPORT STUDENT MENTAL HEALTH

One of many serious psychological tolls of the pandemic is the sense that we no longer have control over our lives. Covid has disempowered us in many ways. Political clashes around public health mandates are one expression of this frustration, but so is the tattered fabric of academic life. Sweeping changes to standardized testing, for instance, upended the way many high school students prepared for college applications. And though eliminating SAT requirements could help thousands of U.S. colleges usher in new levels of racial and socioeconomic diversity, it has also worsened a sense that admissions decisions are unpredictable and arbitrary.[9] How can students put their best foot forward when the grounds for judgment are themselves unstable?

Responding well to these changes is perhaps the definition of resilience, known in psychology as the process of adapting to adversity, trauma, tragedy, threats or significant sources of stress. And research has shown that building resilience depends in large part on mindset. For her Polygence project on **Coping during Covid-19,** Isabel Wang explored a psychological concept known as the Locus of Control (LOC) in a survey of fellow high school students. The results, which earned Wang recognition as a Regeneron Science Competition winner, were both intuitive and eye-opening. Wang's data suggested that students who have a high *internal* LOC–meaning that they believe their own decisions guide life outcomes–coped much better with the ever-changing ambiguities of covid than those with a high *external* LOC, who thought external events dictated their outcomes. Other research supports Wang's findings. In a broad survey of students during lockdown, the research arm of the textbook and tutoring company Chegg found that 53% of high school students said they were "moderately," "very," or "extremely" worried about their mental health. One third reported experiencing depression, and almost a quarter (24%) said they knew of someone with suicidal thoughts.[10] As these numbers suggest, the external forces that dominated adolescent life during covid–from public health protocols, to changing school rules, the suspension of whole athletic seasons, restrictions on socializing, etc.–can severely erode internal LOC, and by extension our ability to cope with challenges.

It's for good reason, then, that experts in curriculum design and administration have advocated for changes that put the power of decision back into the hands of students. Recent advice from Cathy Vattertot and the Association for Supervision and Curriculum Development endorsed, among other things, giving students "more autonomy in learning" and "control over their time."[11] This advice is logical; for students to feel they control their future paths, they must have final say in which direction to go.

For their part, mental health professionals can also help young people to develop skills that can improve their overall mood and happiness, especially through activities that are personally meaningful to them. As Clinical Psychotherapist Michelle Terry has written, "Teens are increasingly searching for and engaging in positive outlets to manage mental health. By doing so, they are demonstrating an impressive ability and desire to be their own best advocates and active participants in their mental health and well-being."[12] As her own daughter demonstrated through **research** on the power of dance therapy in adolescent mental health, projects that tap into a young person's passions can play a powerful role in supporting positive academic and emotional outcomes. "Parents always ask me, 'What's the number one ingredient to set my children up for success?' I always say self-confidence...A strong sense of self and importantly self-confidence will empower young adults to find and nurture their passions. For me, there's nothing better than watching my clients realize their full potential by acting on their passions and making a positive impact on others."



**"TO ME, THERE'S NOTHING BETTER FOR THIS FEELING OF BELONGING THAN HAVING A SINCERE PASSION IN THIS WORLD, ENCOURAGING THEM TO PUT IT OUT THERE, AND HAVING A POSITIVE IMPACT ON PEOPLE."**

**- Michelle Terry (LCSW, MPA)** is a Licensed Clinical Psychotherapist in private practice with over 20 years of experience in the treatment of teens and adults. She holds a Masters in Social Work and Masters in Public Health from New York University and graduated from the University of Maryland with a BA in Criminal Justice.

Results from our research mentorship program at Polygence provides an example of how passion projects like these can also improve student emotional perceptions of school and their academic trajectories. Responses to a post-program Academic Outlook survey of more than 1,000 alumni indicated the experience made them feel more empowered and optimistic on several fronts. 84% agree or strongly agree that doing an independent project helped them feel more in control of their education, and the same percentage said (agree or strongly agree) that their mentor helped them feel more optimistic about their academic future. These sentiments are likely driven not just by personal connections but by the acquisition of tangible skills. 73% of Polygence alumni strongly agreed that their project let them do things they wouldn't have had the chance to do in school, and 88% found that things they learned on their independent projects would help or have already helped them succeed in college.

## FOR STUDENTS TO FEEL THEY CONTROL THEIR FUTURE PATHS, THEY MUST HAVE FINAL SAY IN WHICH ACADEMIC DIRECTION TO GO.

It's worth noting that these students did not select specific courses or even follow predetermined curricula when working with mentors. They received no grades for their work and had flexible deadlines. Each topic was identified by the individual student as something they cared about and the development of the project revolved around their own goals and self assessment. While there are merits to other pedagogical models as well, empowering students to control their own explorations at appropriate times has many positive outcomes.

# Polygence mentorship program statistics

**88%**
said that things they learned in their independent projects will help or have already helped them succeed in college

**84%**
reported that work with their mentor made them feel more optimistic and more in control of their academic future

**73%**
agreed that their project let them do things they wouldn't have had the chance to do in school

# STORYTELLING AS EMPOWERMENT

**IF THE THEORY IS TO GIVE STUDENTS MORE CONTROL OVER THEIR EDUCATION, WHAT SPECIFIC ACTIONS CAN EDUCATORS AND COUNSELORS TAKE TO ACHIEVE IT IN PRACTICE?**

A wealth of related research, from organizational psychology to neuroscience, has shown that the stories we use to describe our lives have a powerful effect on our emotional health. In her book *The Power of Meaning: Finding Fulfillment in a World Obsessed With Happiness,* clinical psychologist Emily Esfahani Smith explores the different ways that people find fulfillment in life. Her findings reveal that striving to be happy often does not produce the desired results. Instead, she discovered that the quest for "meaning," or a sense of purpose, correlates with positive emotions and optimistic outlook far more than "success" or "happiness" do.[13] Research showed that people who have meaning in their lives are more resilient, perform better in school and work, and even live longer than those who don't.

Smith identifies several concepts, or pillars, that can help people achieve a meaningful life: belonging, purpose, transcendence. But a fourth and perhaps surprising pillar of meaning is "storytelling," which includes the narratives that help us understand how we become who we are. One striking aspect of these storytelling exercises is that they closely resemble something students already do for various applications, whether it be to college, graduate school, an internship or job: writing personal essays. And thanks to sustained efforts guiding students along their academic journeys, college and career counselors are uniquely positioned to make that process more than just a means to an end.

Tips for writing great college essays abound online, and many counselors hang their hats on helping students craft memorable and compelling texts. While specific recommendations vary, a common theme amongst public resources, admissions professionals, and the research cited in this paper is that authenticity is key.

Even before choosing an essay topic, then, it can be helpful to draw out some of those authentic interests and commitments out of students. Here are a few prompts for doing so:

- *If you could wave a magic wand and change one thing about the world, what would it be and why?*
- *Is there a person or a group of people you know need help? How would you convince others to support them?*
- *What is your favorite invention that has changed peoples' lives for the better?*
- *What personal trait do you most admire about yourself and how can you strengthen it?*
- *If money was no object, what would you most like to accomplish in your career?*

Essays that reflect authentic interests reveal not only who a student is but who they strive to become. Whether they focus on a challenge overcome or showcase a great achievement, students should express their true passions, rather than something they believe to be popular or pleasing to the reader.

This process also carries the potential for affirmation by helping students to see that failures are actually moments to build their resilience. According to a Polygence mentor and doctoral student in clinical psychology, helping young people alter the way we think about certain situations or reframing negative thoughts about themselves is a core aspect of cognitive behavioral therapy, or CBT, which is often used to treat anxiety and depression. "At the time of adolescence, the emotional regulation system has not been fully developed," says the mentor, "which means that we need to help kids learn the skills and emotional regulation strategies to better

## ESSAYS THAT REFLECT AUTHENTIC INTERESTS REVEAL NOT ONLY WHO A STUDENT IS BUT WHO THEY STRIVE TO BECOME.

prepare them for when they inevitably encounter challenging things." Developing a sense of purpose or meaning can be key in this regard. It is common for students to engage in cognitive distortions such as catastrophizing– for instance, "If I don't get in to X school, I'll be a failure, I'll lose my friends, I'll never get a job, etc"–or assuming the worst outcomes will stem from one, proportionately small result.

So some of the best interventions educators and family members can make is help them look beyond the moment and think about long term goals. By encouraging students to approach their goals like a marathon instead of a sprint, as MacArthur Grant award winner Angela Duckworth does in her celebrated book *Grit: The Power of Passion and Perseverance*, we can help them develop the resilience to overcome relatively small failures like bad grades or even college rejections and make more meaningful contributions to their chosen fields down the road.[14]

Reflecting on their achievements and personal growth throughout the writing process can help students unlock the emotional benefits of storytelling. In this sense, the college essay operates not just as a picture of a student to other people; it can have a profound role in helping students understand who they are and what kind of future they want.



## "AT THE TIME OF ADOLESCENCE, THE EMOTIONAL REGULATION SYSTEM HAS NOT BEEN FULLY DEVELOPED," SAYS THE MENTOR, "WHICH MEANS THAT WE NEED TO HELP KIDS LEARN THE SKILLS AND EMOTIONAL REGULATION STRATEGIES TO BETTER PREPARE THEM FOR WHEN THEY INEVITABLY ENCOUNTER CHALLENGING THINGS."

# PORTFOLIOS AS PATHS FOR GROWTH

**PORTFOLIOS HAVE BECOME A CRUCIAL MEANS OF ASSEMBLING A DRIVEN, DIVERSE, AND CREATIVE CLASS OF NEW STUDENTS.**

Other academic tools can help students take control of their own academic narratives as well. In our last white paper, we traced the ascent of supplemental "portfolios" in college admissions. As a process of collecting and sharing creative works, portfolios have been used in professional fields like art, architecture, and design for centuries, to show "tangible evidence of accomplishments and skills that must be updated as a person changes and grows."[15] The widespread adoption of portfolios in college admissions accelerated rapidly after MIT's introduction of Maker and Research Portfolios in 2013. This supplement gave MIT applicants a place to share details about an independent project—a computer program, a sculpture, a rocket—that otherwise may not have appeared on their applications. The program was a huge success by most measures, and many other schools followed suit.

In fact, these portfolios have become a crucial means of assembling a driven, diverse, and creative class of new students. Technological advancements have helped accelerate this change, allowing many schools to collect portfolio-style supplements. Organizations like the free college planning tool Coalition for College have standardized such material inputs as part of the admissions process, helping schools to perform holistic reviews of applicants through their research papers, creative pursuits, and passion projects. As of 2020-01, the Coalition, in use at 135 top schools, encourages applicants to include these types of materials in a digital "locker."

Building a compelling portfolio, however, requires more than merely listing all activities a student did in high school. In order to craft a compelling narrative, an author needs to emphasize some things and remove others. "Think of portfolios as another mode of communication," says Devin Dobrowolski, an Assistant Professor of Architecture at the University of Virginia and Director of the school's graduate architecture program. "Editing and composing them tells a clear story and can show confidence and clarity of thought."

**Portfolio Example 1**

# Molly Miller's Polygence project

The student researched current advancements and proposed ideas for **wind technology in future Mars missions** and **designs for a rocket prototype utilizing wind turbines to generate electricity.** Her paper showcased her own designs for using wind turbines on rockets to generate a backup electricity source during launch, as well as the experiments she conducted. "[Engineering Project on Wind Power Generation Utilizing Aerospace Transportation](#)" and other engineering projects are available on her personal website. Molly is now a first year student at Stanford.

**"THINK OF PORTFOLIOS AS ANOTHER MODE OF COMMUNICATION... EDITING AND COMPOSING THEM TELLS A CLEAR STORY, SHOWS CONFIDENCE AND CLARITY OF THOUGHT."**

**- Devin Dobrowolski**
Assistant Professor of Architecture at the University of Virginia and Director of the school's graduate architecture program

In his reviews of portfolios over the years, Dobrowolski frequently sees students try to present every project as a polished final product. The impulse is natural, but the results can be underwhelming. The most memorable examples, by contrast, often show the evolution of specific skills or creative thought processes, like a student who cited experience creating meals in a restaurant as the basis of their design language. Some of the best include instances of productive failure and resilience. "It's not just evidence that you're trying to get to the finish line to get accepted," Dobrowolski explained, "but that you have the capacity to continue to thrive" after you've graduated.

While creating a compelling portfolio is, like so many things, a process honed over time through trial and error, there are still a number of steps anyone can follow to create edifying results.

**A sample of colleges that explicitly reference "Research Projects" in Supplementary Application Materials**

- MIT
- Yale
- Columbia
- Brown
- Princeton
- Dartmouth
- UPenn
- UChicago
- Wesleyan
- Bowdoin

# Pedagogical research has identified eight traits that define an effective portfolio[16]

## 1  Self Reflection

Portfolios must involve personal reflection. Students need to look back on all their projects, recall occasions when they struggled, and, ideally, gain new clarity on what they must improve.

## 2  Ownership

The portfolio is something that must be done by the student, not to them. Teachers or counselors can encourage students and give feedback but the student must themselves take the work seriously.

## 3  Curation

Project examples should be thoughtfully selected. An exhaustive list of all efforts defeats the purpose of the purpose of the exercise.

# 4 Clarity

Each featured project should have a clear rationale. What personal trait or belief does an individual project convey to the reviewer? Why did the student choose to work on that specific issue or idea?

# 5 Development

Building on the point above, these projects should show personal development when placed in the portfolio. It's important for this reason that the selected examples are not all from the student's final year of high school or university. When considered in succession, they should show increasing maturity.

# 6 Growth

Similarly, the portfolio on the whole should illustrate intellectual growth. This means later project examples should tackle more sophisticated issues than earlier ones.

# 7 Focus

While not a requirement, more advanced students or those applying to specialized programs can select projects with a consistent focus or long-term goal.

# 8 Precedent

Finally, strong portfolios are molded by example. There are many great resources for students to explore on this front. Accepted students frequently review their applications and portfolios to youtube, and admissions departments at certain schools like Tufts University's School of Engineering feature a number of excellent examples. This can also provide young people an opportunity to reach out to teachers, mentors, parents, or professionals in their fields of interest to ask for examples or even to listen to their career narratives.
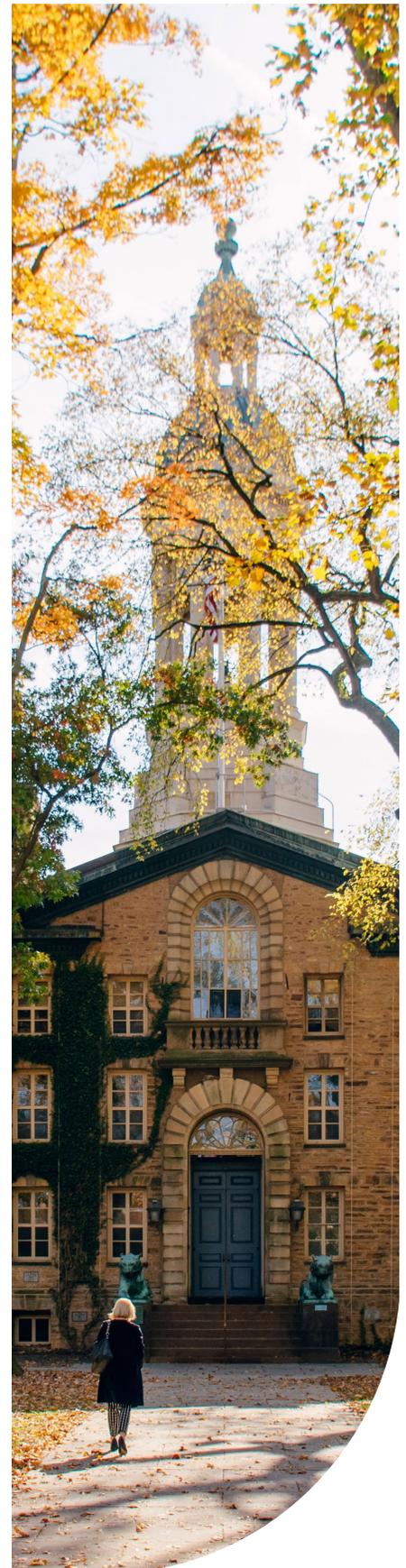
If a student diligently engages in each of these steps, their portfolio can be a success even before they submit it to colleges. Creating a portfolio through the steps above can lead to a thoughtful accounting of the choices students made, reminding students their decisions led to where they are now. Research by business school professors Adam Galinsky and Laura Kray has explored how such moments provide opportunities for "counterfactual thinking" by asking college students to imagine how things might have turned out differently if they had gone to a different school.[17]

This simple exercise made participants rate their college experience as more meaningful. They were more likely to endorse statements like coming to that college has "added meaning to my life," and helped define who they were. Galinsky and Kray's research suggests that reflecting on experience with this what-if mindset requires a greater investment in the "sense-making" process than merely thinking about the meaning of the experience. In other words, when we take the time to recognize how our past decisions have changed the course of our lives, we seem to strengthen an internal locus of control and thereby the feeling that we can positively influence the direction our lives will take in the future.

**THIS SIMPLE EXERCISE MADE PARTICIPANTS RATE THEIR COLLEGE EXPERIENCE AS MORE MEANINGFUL. THEY WERE MORE LIKELY TO ENDORSE STATEMENTS LIKE COMING TO THAT COLLEGE HAS "ADDED MEANING TO MY LIFE," AND HELPED DEFINE WHO THEY WERE.**

Portfolio Example 2
# Matteo Farinacci's Polygence project

Matteo Farinacci's Polygence project was to create **a digital creative portfolio with the help of his mentor Amira, who holds an MFA from School of the Art Institute of Chicago and is an Adjunct Professor at Columbia College.** "As I conclude my education I need to create a platform that represents all of my varied interests to present to potential universities and employers… In my portfolio I want the user to feel an organized flow while scrolling through the website. I plan to do this by seamlessly connecting my various interests into abstract categories based on the skills behind them."

# THE VALUE OF RESEARCH IN COLLEGE APPLICATIONS: FURTHER EVIDENCE

If there is a coherent lesson to draw from these insights, it might be that for young students their educational journey can itself be a type of reward. Applying to college in particular provides a unique opportunity to reflect on all the strides they made in high school, including the failures they endured and what they did to move past them. Indeed, widely used curricula like the International Baccalaureate Diploma Programme include reflection as one of the key assessment criteria for student engagement with its extended essay process.[18]

But the outcomes are also material; the projects that form the content of these essays and portfolios have significant value. In fact, admissions results continue to show that independent academic and passion projects can often tip the scales towards acceptance at certain schools. **Our analysis** of 160,000 domestic applications to Harvard College showed that thousands of students with perfect grades and test scores still had only an 8.6% chance of getting in because their applications contained "no evidence of substantial scholarship or academic creativity." By comparison, those who submitted independent research or other creative work that required review by college faculty had a chance to earn the highest academic rating, which then increased their likelihood of admission to 68%.

Admissions offices seem poised to continue this trend. In a blog post about the record 55,000 applications for the freshman class of 2026, University of Pennsylvania Admissions Dean Whitney Soule highlighted research as a common attribute of its admitted students.[19] Nearly "one-third of the admitted students engaged in academic research during their time in high school, many earning national and international accolades for research that is already pushing the boundaries of academic discovery."[20]

It should be no surprise that schools like Harvard and UPenn look favorably on such experience. Research success directly accrues to both the funding and prestige of elite universities. And since research requires extensive training to do well, students who begin that learning process in high school promise to make more immediate contributions to faculty projects at colleges and universities where they continue to learn methods, refine protocols, and contribute to their chosen fields.

**1/3 of students** admitted to UPenn's class of 2026 engaged in academic research in high school,

many earning national and international accolades for research that is already pushing the boundaries of academic discovery.

# CONCLUSION: STRIVING FOR THE GREATER GOOD

**MANY YOUNG PEOPLE TODAY ARE THINKING ABOUT THEIR RESPECTIVE PATHS WITH AN INSPIRING SENSE OF PURPOSE EVEN BEFORE ARRIVING AT COLLEGE.**

While telling positive stories may seem like a simple thing, the research surveyed in this paper shows it can help to cultivate a sense of purpose that transcends where a student goes to college. In light of the many stressors that weigh on young people today, even these small rituals of reflection can therefore provide real benefit. Of course, young people are not unique in their need of positivity and purpose. Even before the pandemic, the World Happiness Report found in 2019 that all major measures of happiness among adults were at or near record lows, while worry and stress have risen by 8% in 2020 and again by 4% in 2021.[21] In this climate, the likes of "Crafting Your Purpose" guides published by the Harvard Business Review or research from UC Berkeley's Greater Good Science Center are addressing a pervasive need in the contemporary workforce and society at large.

It is also true that this generation of adolescents have enormous challenges to address, from public health calamities to climate change. Recent research has even shown that moderate amounts of stress, if properly framed and paired with a growth mindset, can even improve psychological well-being and academic success.[22] Endeavoring to solve or mitigate big problems, whether by driving towards a cure for cancer or developing renewable power sources, has the potential to make them more optimistic about their future.

Given the existential nature of these dangers, reflections on what constitutes a good life may provide further reassurance. In his keynote address at Polygence's 7th Symposium of Rising Scholars, Professor Michael Puett spoke about lessons we can glean from ancient Chinese philosophical texts. Adapted from his highly popular course at Harvard and a related book titled *The Path: What Chinese Philosophers Can Teach Us About the Good Life,* Puett proposed that we regard the decisions we make each day, however mundane, as consequential steps on our journey through life. His message is that the *Dao,* or the Way, is nothing more than what we make of it. "The Way is not a harmonious 'ideal' we must struggle to follow," he writes. "Rather, the Way is the path we forge continually through our choices, actions and relationships. We create the Way anew every moment of our lives."[23]

There is ample evidence that many young people today are thinking about their respective paths with an inspiring sense of purpose even before arriving at college. In another striking statistic from UPenn's admissions report, over 80% of students admitted to the class of 2026 had performed some socially-minded action while in high school, ranging from community service to sustainability and environmental equity initiatives. Put plainly, these students had made authentic efforts to contribute to something more than their own resumes, to strive for the greater good.

Encouraging students to tackle real problems, whether large or small, is therefore an excellent way to empower them. For one, engaging issues they care about outside the classroom allows them to exit the cycle of deadlines and grades that dominates secondary school experience. Projects that tap into a sense of purpose can provide salves for the emotional pains caused by the pressure to excel. Collaborative endeavors like research can bring people together in the spirit of collective inquiry and common goals. Like any work, it still requires independent effort, but it also blossoms through conversation, reassurance, and constructive criticism.

By way of conclusion, we acknowledge that when it comes to generational challenges there can be no easy answers. Mental health is, of course, a fraught issue involving numerous, difficult to quantify inputs. Yet while helping students to engage in research or build a portfolio is hardly a panacea for the struggles young people face today, our analysis in this paper demonstrates that some simple practices have significant positive effects. We hope some of the techniques described above can help educators of all stripes empower students to take control of their education and to follow their own paths, day by day, step by step.



**"THE WAY IS NOT A HARMONIOUS 'IDEAL' WE MUST STRUGGLE TO FOLLOW... RATHER, THE WAY IS THE PATH WE FORGE CONTINUALLY THROUGH OUR CHOICES, ACTIONS AND RELATIONSHIPS. WE CREATE THE WAY ANEW EVERY MOMENT OF OUR LIVES."**

**- Michael Puett**
Walter C. Klein Professor of Chinese History and Anthropology at Harvard University

# RESOURCES

## On Supporting Students

**Resilience guide for parents and teachers from the American Psychological Foundation**
https://www.apa.org/topics/resilience/guide-parents-teachers

**Protecting Youth Mental Health: The U.S. Surgeon General's Advisory**
https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf

**Design Principles for Schools: Putting the Science of Learning and Development Into Action**
https://k12.designprinciples.org/

## On Preparing for Essays

**The Path: What Chinese Philosophers Can Teach Us About the Good Life by Prof. Michael Puett**
https://www.harvard.com/book/9781476777849_the_path_what_chinese_philosophers_can_teach_us_about_the_goo/

**TED Talk by Prof. Angela Duckworth on Grit: the power of passion and perseverance**
https://www.youtube.com/watch?v=H14bBuluwB8

**College Essay Guy's Warm-Up Exercises**
https://www.collegeessayguy.com/cwiab-student-13-warm-up-exercises

## On Building Portfolios

**Article on Maker Portfolios: Authentic Assessment that Tells a Story, from Teachers College, Columbia University**
https://fellows.fablearn.org/maker-portfolios-authentic-assessment-that-tells-a-story/

**Examples of Maker Portfolios from Tufts University's School of Engineering**
https://admissions.tufts.edu/apply/first-year-students/school-of-engineering/

**MIT Maker Portfolio Guide**
https://mitadmissions.org/apply/firstyear/portfolios-additional-material/

## About the author

George Philip (GP) LeBourdais is a former high school teacher, Fulbright Scholar, and the Head of Partnerships at Polygence. He holds an BA from Middlebury College, an MA from Williams College, and a PhD from Stanford in the History of Art & Architecture. GP worked as a Graduate Consultant for Stanford's Vice Provost for Teaching and Learning to help instructors across the university improve their teaching. Before joining Polygence, he held a two-year postdoc as the Research Program Manager at Stanford's Digital Humanities lab, the Center for Spatial and Textual Analysis.

 **Polygence**

## On Polygence's Research

As part of our mission to help students take control of their education, the team at Polygence engages in research on topics that affect the lives of young people, their families, and educators. As a team of advanced degree holders, we are constantly exploring developments in the fields of educational research, Project-Based Learning, college admissions and more that empower our community to make the most of their studies and careers. To sign up for future white papers and other updates, scan the code at right.
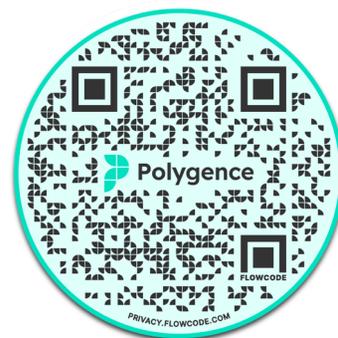
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