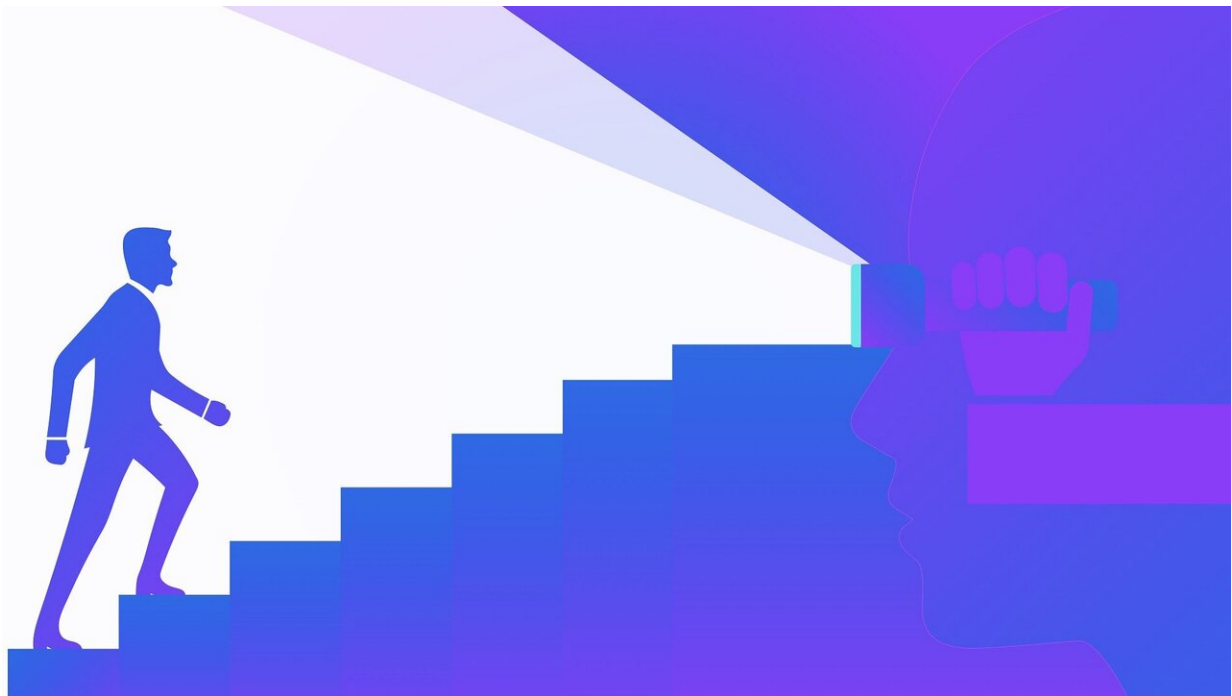


A growth mindset of interest can spark innovative thinking

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From climate change to the ongoing pandemic and beyond, the issues facing today's world are increasingly complex and dynamic. Yet solving problems like these—which interweave social, environmental, physical, and political factors—requires new approaches that extend beyond traditional ways of thinking. It requires people to draw upon and integrate seemingly disparate areas of knowledge, such as the arts and

the sciences. This kind of integrative thinking, or the ability to combine knowledge from diverse fields, is critical for generating effective, innovative solutions to tackle local and global problems. A study led by Yale-NUS College Assistant Professor of Psychology, Paul A. O'Keefe, found that having a "growth mindset of interest" may spark this type of innovation.

Asst Prof O'Keefe, who also holds a courtesy appointment with the National University of Singapore (NUS) Business School, had established in an earlier set of studies that people hold different beliefs about the nature of interest. Those with a growth mindset of interest tend to believe that interests can be developed and cultivated, while those with a fixed mindset of interest tend to believe that interests are inherent and simply need to be 'found.' In their foundational research, they showed that those with a growth mindset were more open to areas outside of their core, pre-existing interests than were those with a fixed mindset.

Building on these findings, the latest research examined how a growth mindset of interest can boost integrative thinking across the traditional disciplinary boundaries of arts and sciences. Conducted by a team from Yale-NUS College, comprising Asst Prof O'Keefe, Senior Research Fellow E. J. Horberg and Yale-NUS alumni Anandita Sabherwal, Gabrielle C. Ibasco, and Adlin Binti Zainal, this new research was recently published in *Organizational Behavior and Human Decision Processes*.

The study found that a growth mindset of interest can increase people's tendency and ability to generate ideas that bridge their well-established area of interest (say, in the arts) with one outside of it (like the sciences). For example, in one task, research participants were instructed to create new college majors by combining two or more existing academic Arts or Science programs at their university. After coding and analyzing the

ideas they generated, the team found that people with a growth, as compared to a fixed, mindset of interest were more likely to bridge programs across the arts and sciences to create new majors like computational linguistics—the use of computer modeling to understand natural language—rather than creating majors that drew from only one of those areas, like computational chemistry—the use of computer modeling to understand chemical processes. The analysis also revealed higher quality integrative ideas from individuals with a growth mindset.

Asst Prof O'Keefe emphasized that understanding these connections can have important implications for organizations. "This research provides a useful direction for organizations whose products and services call for integrated and creative solutions. Take smartphones, for example. You not only need computer science and engineering knowledge, but also an understanding of psychology and visual design to create a product that is useful and resonates with the user. When organizations hire people with a growth mindset, or promote it among their employees, those employees may be more likely to devise innovative ideas that bridge multiple areas of knowledge to achieve better solutions," Asst Prof O'Keefe elaborated.

The benefits of a growth mindset of interest may also extend to those seeking employment. This is a pressing issue because many people are becoming unemployed due to the COVID-19 pandemic, as well as developments in automation and artificial intelligence. Added Asst Prof O'Keefe, "Having a growth mindset of interest can help job seekers expand their vocational interests and become more adaptable and open to different fields, and take the initiative to learn new skills. For example, whereas some engineers may restrict themselves to technical roles, an engineer who develops an interest in marketing might accrue the skills and knowledge needed to gain employment in the sales team of an engineering firm."

In addition, the research supports the rationale for interdisciplinary learning to better prepare students for the unpredictable future, as well as for training them to be flexible thinkers and problem solvers. An interdisciplinary education enables students to develop a breadth of knowledge across different fields and teaches them to integrate these ideas. However, Asst Prof O'Keefe noted that there is more to this than simply designing an interdisciplinary curriculum. While undergraduates with a growth mindset of interest are more likely to take advantage of the diversity of learning opportunities that universities offer, those with a fixed mindset may remain fixated on their pre-existing interests or "calling," and may fail to see how outside areas of knowledge can be connected and integrated with their existing interests. Over time, those with a growth mindset are more likely to become interdisciplinary thinkers and carry that tendency to their working life, better preparing them to succeed in an economy that increasingly values innovative, interdisciplinary solutions.

Given the potential of a growth mindset of interest for innovation, this begs the question: Can a growth mindset of interest be cultivated?

"Under the right circumstances, absolutely," said Asst Prof O'Keefe.

"People can be influenced to adopt a [growth mindset](#) of interest if they are immersed in an environment with a culture that promotes and reinforces the idea that interests can grow and develop. Moreover, there must be opportunities for people to act on their belief that new interests can develop. Therefore, universities and organizations, among others, may wish to provide opportunities to explore new topics and activities, be it through workshops, elective courses, or facilitating collaborations among people with different areas of [interest](#) and expertise."

Asst Prof O'Keefe elaborated, "Understanding that interests can develop is the first step. It takes time and conducive environments to develop and reinforce that [mindset](#). Ultimately, that may spark out-of-the-box thinking and game-changing innovations."

More information: Paul A. O'Keefe et al, Thinking beyond boundaries: A growth theory of interest enhances integrative thinking that bridges the arts and sciences, *Organizational Behavior and Human Decision Processes* (2020). [DOI: 10.1016/j.obhdp.2020.10.007](https://doi.org/10.1016/j.obhdp.2020.10.007)

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