

Explained: How interdisciplinary education empowers designers

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India Today Web Desk

New Delhi

March 10, 2021

UPDATED: March 10, 2021 14:09 IST

HIGHLIGHTS

- Designers have the opportunity to utilise rich knowledge domains, and thoughtfully organise them as products of design.
- The field of Design Thinking was born out of mankind's societal, technological and organisational needs, merging into one.

Interdisciplinary education is a widely discussed topic in academia for the past decade or so, and rightly so. Much has been written about this and with the introduction of the new National Education Policy, Liberal Arts have become the flag-bearer of interdisciplinary education in India.

The crucial question is: what is the difference between interdisciplinary and multidisciplinary? Why are the two approaches the future of education, research, and the modern workplace?

It has become very obvious in the last few decades that problems confronting the world are complex and global.

No singular knowledge domain can solve these complex challenges, for example, the problem of climate change cannot be solved through means of science alone, a multidisciplinary

approach integrating such knowledge domains as psychology, politics, development economics, history, sociology, anthropology, culture studies is needed - this integrated approach is interdisciplinary education.

Such an integrated approach to understanding challenges and problem solving is what is needed today not just by those studying or practicing Design but by all vocations engaged with dimensions of life in all its myriad forms- so politicians, policy makers, innovators, environmentalists' ecologists, educationists and more need to acquire multiple intelligences and use these in reshaping our world in a healthy and a sustainable way.

To create a sustainable high-performance textile composite, a researcher employs biotechnology, materials science, and design collaboration to successfully test for textile applications.

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The future of most of our innovations is at the crossroads of cutting-edge disciplines such as nanotechnology, biotechnology, artificial intelligence, material science, cybernetics, food technology, and more. Designers have the opportunity to utilise rich knowledge domains, and thoughtfully organise them as products of design.

The industrial revolution and the World War II, pushed the boundaries of technology and we saw the birth of several solutions that are now part of our daily life. Throughout the 20th century, scientists, architects, engineers and industrial designers pooled their knowledge to address significant societal challenges.

Leveraging the skills of problem-solving and innovation, multidisciplinary teams, led by theorists and practitioners alike, were able to impact human life.

Design Thinking:

The field of Design Thinking was born out of mankind's societal, technological, and organisational needs, merging into one. Today, organisations such as CERN and IDEO are changing our understanding of this interconnectedness between disciplines of humanities, arts, and science, by employing multidisciplinary teams.

In India, the quest for holistic education is not new and has been embedded in our academic traditions and pragmatic approach to life. After independence an approach to education emerged that privileged science and technology to detriment of other disciplines. However, today we have the opportunity provided by NEP to develop new integrated thinking and encourage our students to synthesise knowledge sources to create new paradigms in learning.

In my experience, students who are focused on making a societal impact are keen to become polymaths, who can apply their acquired knowledge of various fields to solve complex problems. Even though educators have tried to segregate several disciplines, students intuitively grasp the interconnectedness between them. The new generation is unafraid to push the boundaries of design and is no longer restricted to the canons of design theory.

It is true that the challenge for higher education is to teach students the ability to appreciate inter relationships in our diverse knowledge resources. Critical thinking, that illuminates the path between disciplines, has become a must-have skill for the future.

Other essential skills such as teamwork, ethical decision making, oral communication, writing, organisational skills, problem-solving and the ability to apply knowledge in complex, multidimensional settings, are desirable in individuals who work in teams. Individuals equipped with these skills are sought-after in the increasingly complex global marketplace.

A term that has come to represent this new breed of individuals is 'solutionaries' - revolutionary thinkers with a solution-oriented mind-set.

The burden of finding sustainable solutions to the myriad problems faced not just by humans but by all species of life and all aspects of nature, is on the current generation of humans, who if successful, will ensure that our planet never gets to worry about these problems. Educational institutions must equip this generation with relevant tools to save humanity. Students whose understanding is enriched by inputs from numerous disciplines carry the key that will unlock a future that is safer and more humane.

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