Embracing Change: Shaping Education And Shifting Perspectives

Six Strategies In The Leap From The Great To The Inspirational Teacher.

"I have come to believe that a great teacher is a great artist, and that teaching might even be the greatest of the arts since the medium is the human mind and spirit."
John Steinbeck.

Education is truly embracing change. Change, the most difficult challenge in life, brings unexpected consequences in the belief that the risk-imposed result in an overwhelming positivity that anything is possible. This is the core challenge we face as educators, not only for students to embrace change in themselves but also in ourselves. Over the past half-century, we have seen many educational changes with an assortment of strategies and methodologies in the hope that these will achieve these desired goals. However, the 2019 National Assessment of Educational Progress (NAEP), based on research funded by the National Assessment Governing Board (NAGB), reported that 37% of twelfth-grade students were academically prepared for college reading readiness[1] together with 37% for college mathematics readiness[2], and, only 22% of twelfth-grade students performed at or above the NEAP Proficient level on science assessment[3]. Also, according to results released in 2021 by the National Center for Education Statistics (NCES), for the first time in almost 50 years of NAEP long-term assessment

[1] https://www.nationsreportcard.gov/highlights/reading/2019/g12/

[2] https://www.nationsreportcard.gov/highlights/mathematics/2019/g12/

[3] https://www.nationsreportcard.gov/science/nation/achievement/?grade=12

measures, reading and mathematics scores of 13-year-old students fell between 2012 and 2020[4].

The reasons for such disturbing numbers are varied and debated, however; the educational methodologies and strategies over the past half century have indeed been effective and essential when applied as a basis for teaching within the fixed compartmentalized categories of the "liberal arts", i.e. mathematics, the physical, biological and social sciences, the arts, and the humanities, et.al. Although this approach has been extremely effective from 1970 to 2012 (see footnote 4), where assessment scores grew across the curriculum, the decline over the past decade, we believe, is due to an unintended increasing tendency to keep subjects divided without interdisciplinary interaction.

[4] https://www.nationsreportcard.gov/ltt/supporting_files/2020_LTT_Press_Release.docx

This outcome is an understood necessity in keeping pace with our advances in specific disciplines not limited to the biological, physical, and mathematical sciences, but extending across all areas with the tidal wave of information resources, social networking, and advances in educational technology. These are, of course, all positive advances with overwhelming teaching and learning advantages. However, this has also had the effect of further compartmentalizing subjects once taught in tandem where the phrase "Arts *and* Sciences" has become the "Arts *or* Sciences" which we discussed in a previous Innovative Abstract article *Can Science Survive Without the Humanities? A Forgotten Creative Reciprocity!*[5]. Since that article, we have given several educational talks and workshops on how to ignite the light of curiosity and creativity in every mind at any time in any discipline across all educational modalities. We introduced The Inspirational Six (The i6) methodologies to transition from the "practice" of teaching to the "art" of teaching that provides positive, effective teaching strategies focused on six key fundamentals: *To Animate, To Originate, To Rejuvenate, To Stimulate, To Explore "Deus Ex Machina",* and *To Tell the Story*.[6]

Looking back at the history of our own education one thing stands out, we remember a few teachers but have forgotten most. As we all know, education is personal, interactive, inquisitive and inspirational. These are the qualities inherent in the i6, independent of any specific pedagogy, that we naturally possess as educators. We, as students, remember those that ignited our imagination, curiosity and creativity, the essential ingredients of

[5] https://www.nisod.org/2019/01/23/xli_2/

[6] See the article in footnote 5 for a detailed description of the i6 Strategies

life-long learning, and maybe why our career choice was education.

The i6 helps teachers, at all levels, to rekindle exciting interdisciplinary connections revealing how all academic subjects work in tandem. We found this to be an exciting interactive journey wherein The i6 strategies and methodologies cultivate and implement inspiring collaboration, emergent creativity, and intellectual versatility bridging a wide range of subjects to enhance the learning experience. The very nature of The i6 methods illustrates the ease of transition across all teaching modalities in traditional classrooms, asynchronous and synchronous virtual learning platforms, and hybrid learning environments. Recognizing discipline curricular limitations, these strategies are designed to be incorporated during any of these delivery modalities.

To this end, our workshops have focused on enhancing and encouraging every teacher's innate talents, knowledge base, and creativity to:

- Demonstrate and practice the i6 Strategies in their disciplines.
- Research various modalities, e.g., online resources, captivating videos, engaging library resources, etc. enhancing and illustrating the i6 strategies and methodologies.
- Develop a meeting-of-minds experience between all participants to generate stimulating i6-based discussion questions and activities.

- Transition the i6 strategies into the classroom regardless of the modality where students grow from passive learners to active participants.
- Create best practices to bring to life unexpected interdisciplinary connections.
- Demonstrate critical thinking and problem-solving discovery activities revealing creative and unorthodox problem solutions.

The intended consequence is a more enhanced understanding and application of how subjects weave and evolve together by exploring familiar and new connections thus giving rise to prolific creative leaps in all disciplines.

We observed, after reflecting on our many years of teaching, that we were using these i6 strategies intuitively within our disciplines spanning philosophy, humanities, the sciences and mathematics which did have an overall positive student impact.[7] Reviewing more than five college program reviews over 25 years, one pattern became predominate in the program review summaries[8]:

- STEM students exposed to brief historical, philosophical, literary, and artistic motivational references to their subject matter, exhibited around a 40% increase in future elective enrollment in the arts and humanities areas.

[7] The authors had interdisciplinary certifications in each other's areas and taught at least one course within each other's areas, as adjunct faculty, in addition to their regular faculty load.

[8] These data are comparatively reported as averages over five 5-year program reviews charged to the authors as department heads in the two areas of the humanities, and, the physical sciences in a multi-campus community college district serving approximately 30K full- time student equivalents (FTSE) per year. The percentages are data correlations reported through independent program review summaries and not through detailed statistical analysis.

- Humanities, Art, and Social Science students exposed to brief historical, philosophical, and scientific motivational references to their subject matter exhibited around a 25% increase in future electives enrollment in the sciences and mathematics areas.[9]

Realizing that our certifications, which allowed for inter-disciplinary teaching, were unique and could rarely be expected as a general norm among departmental areas, we knew that as teachers we bring to the classroom a wealth of knowledge, talents, and wisdom that can illustrate how subjects spanning all areas from STEM to the Humanities weave and evolve together well beyond the specific course content.

[9]Based on these data, the administration continued in supporting and encouraging this interdisciplinary teaching in our areas.

To inspire and cultivate collaborative thought, creative expression, and intellectual versatility we believe it is time to embrace change and to reverse these downward learning trends by showing how subjects inter-influence and interconnect in a way that ignites a passion to learn and awaken our student's innate curiosity and childhood creativity. Understanding the challenge to put into practice a more holistic teaching approach, we developed workshops, demonstrations, and presentations[10] as a way to incorporate our i6 strategies without embedding curriculum changes that augment course content. We named ourselves S.H.A.P.E. Shifters—wherein Science, Humanities, Arts, Philosophy, and Education (SHAPE) are revitalized and reintegrated naturally throughout the curriculum and across disciplines. We share our ideas in these workshops and presentations for educators to adopt and adapt to their classrooms in the hopes of enriching the learning experience and making the leap from being a *great* teacher to an *inspirational* one.

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[10] See NISOD Workshops Using The Inspirational Six (The i6) to Rekindle the Light of Creativity https://www.nisod.org/available-workshop topics/detail/?topicID=30&topicToken=9u2r2q9xrYAXt3jns1lq

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