



Photograph by author (2014) of student art work

Innovate!

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Ignoring Art Academically

Is your child's whole brain fit for a job in the future?

Automation is suggested to be one of mathematics biggest innovations of the past one hundred years. It appears any simple computer can resolve the most difficult calculation faster and more reliably than the brightest mathematicians in this world¹. The laws of mathematics, considered one of the academic subjects, have for hundreds of years fundamentally stayed the same. In a world where the source of competing successfully, as a subject, an individual or a business, is argued to be innovation (Adler³, Levitt²) the development of the academic subject of mathematics appears rather stagnant in comparison to the innovative redesigned way of data processing by computers.

Pink argues "new technologies are proving they can replace human left brains"(pg.44)¹. Political, business and educational leaders around the world appear to look towards innovation, arguably non-academic, more than to anything else to secure the economic future of nations. Adler argues societal economic success is suggested to be the source of peace

between nations by Wertheimer who has combined arts and business to create "no less than the simultaneous achievement of outstanding financial success and the creation of peace in the Middle East" (pg.493)³.

According to such famous educational theorists as Dewey¹⁵ and Eisner⁴ and Managerial experts like Pitcher¹¹, Art is the academic faculty of holistic thinking to innovate, unlike academic subjects, e.g. Algebra or Geometry, which use analytical thinking to establish relations between a subjects' elements'; i.e. "component qualities"⁴.

Clausewitz⁵ argued that knowledge, i.e. experience based information processing, must become genuine capability, the source for innovating successfully.

Mullen²⁶ argues such a mechanistic approach to resolving challenges in a continuously changing world is suggested to be insufficient to provide solutions for tomorrow's problems. Admiral Mullen⁶ argues we should rather "choose to go small in number before we go hollow in capability" and in solving societal conflicts he "favours innovation in leaders, in doctrine, in organization and in technology". Both persons notions find support in Clausewitz (1883):

"By total assimilation with his mind and life ... [a leader's] knowledge must become genuine capability. ... we say natural talent to distinguish it from talent that has been trained by ... study."

Clausewitz, pg.147⁵

Pink argues the urgency of learning design and artistic thinking in light of an approaching paradigm shift, i.e. from analytical to holistic thinking. He argues analytical thinking to be insufficient to "professionally succeed" or to be "personally satisfied"(pg.51)¹. Noddings⁷ argues currently accepted academic subjects to be too nonhuman and technical, leaving out human elements of innovation and holistic thinking.

Let us now explore art's claim as the academic faculty of holistic thinking for innovation that can help secure a nations economic future.

"Knowledge must be absorbed into the mind that it almost ceases to exist in a separate, objective way. ... When an architect sits down with pen and paper to determine the strength of an abutment by a complicated calculation the truth of the answer at which he arrives is not an expression of his own personality. ... he selects the data ... submits them to a mental process not of his own inventions ... which applies for the most part mechanically."

Clausewitz, pg.147⁵

Holistic Thinking...

Innovative thinking

Interestingly enough in the following well known books on educational theory and research, the term holistic thinking cannot be found in the glossaries:

Dewey's 2008 *Democracy and Education*, Freire's 2000 *Pedagogy of the Oppressed*, Giroux's 1997 *Pedagogy and the Politics of Hope*, Eisner's 2002 *The Arts and the Creation of Mind*, Greene's 1995 *Releasing the Imagination* and Noddings's 2002 *Educating Moral People*.

Leeds⁸, argues left brain thinking to be sequential, analytical and objective focusing on the singular and right brain thinking to be nonlinear, intuitive, empathetic and focusing on synthesizing all the information from both sides of the brain. Pink suggests combining "analysis and synthesis" thinking for what he calls using "the whole mind"¹. DeBono compares the different types of thinking as "analysis thinking versus design thinking" and argues that informed solutions require both types of thinking (pg.16)⁹; what we call henceforth, holistic thinking.

Relevance of ...

Holistic Thinking

Drucker argues future success to require "considerable knowledge of a complex world" (pg.225)¹⁰. Drucker suggests furthermore that there will be an abundance of equally educated analytical workers in the future job market from which companies will choose the best. Companies appear to be looking for knowledge workers with artistic qualities as Adler (pg.491)³ writes, "Creating the next great thing demands constant innovation; it's a design task, not merely an analytical or administrative function. Historically, such creativity has been the primary competence of artists, not managers"

Pitcher's research into what makes a great leader turned her towards

"aesthetics, [and the] philosophy of art". She cites Ruskin to have written, "fine art is the domain in which the hand, the head, and the heart go together, [in] humanity's "Finest hour" (pg.217)¹¹. Pitcher concludes,

"... in aesthetics the whole person - willing, feeling, thinking, acting--- is restored to us"

New Realities

Pink argues western society has developed from an "Agricultural Age" of farming to an "Industrial Age" of factory work followed by our current "Age of Information" (pg.49)¹ filled with analytical thinking "knowledge workers" (pg.79)¹⁰. Pink further argues knowledge workers will

Pink¹; Adler³). The capital, i.e. information and knowledge, and motivation, i.e. autonomy, continuous education, responsibility and being treated as an asset rather than a cost, of knowledge workers is argued to differ highly from the capital and motivation of labour workers¹⁰. Drucker¹⁰ argues analytic thinking drove our past and suggests the necessity to pay heed to the developing humanistic motive drivers. He argues that the rise of computer automation will reduce the need for purely analytical thinkers, what Pitcher refers to as "technocrats" (pg.4)¹¹.

Conceptual Age

Pink argues that three factors, i.e. "... abundance of goods ... outsourcing of linear thinking jobs to Asia ... computer technology's automation", will impose on the developed west a shift from an

In March 2005, Dan Pink¹ asserted

"... the MFA is the new MBA".

... businesses are realizing that the only way to differentiate their goods and services in today's overstuffed marketplace is to make their offerings physically beautiful and emotionally compelling. Thus the high-concept abilities of an artist are often more valuable than the easily replicated L-Directed skills of an entry-level business graduate.

now need to become "creators and empathizers" (pg.49)¹ in the coming Conceptual Age. Adler argues that the twenty-first century is the "right time for the cross-fertilization of the arts and leadership" (pg.487)³ in business and societal practices. She further cites U.N. Secretary General Kofi Annan who implores businesses and creative people to work together to co-create "society's success" (pg.489)³.

Information Age...

Thinking Work

With mechanical automation people's educational focus went to knowledge trades, e.g. engineering, accounting, medicine, law and more (Drucker¹⁰;

information to a "Conceptual Age" (pg.49)¹. It is suggested that due to the fast growing number of low cost knowledge workers in developing countries, developed countries are under pressure to find the next economic break-through and "innovation and the creativity that drive it are seen as crucial to the process" (pg.46)¹².

"The growth of the conceptual component of output has brought with it accelerating demands for workers who are equipped not simply with technical know-how, but with the ability to create, analyze, and transform information and to interact effectively with others."

*Greenspan*¹³

Arts and ...

Holistic Thinking

Art teaches “how to see the interactions among the qualities constituting the whole” unlike traditional academic subjects focusing on “component qualities” (pg.76)⁴. Due to art’s flexible thinking and purposing students are encouraged to find multiple innovative solutions (Arnheim¹⁴, Dewey¹⁵, Eisner⁴). Sir Read (1965) argues that art synthesises all broad information to create holistic revelations which “... [have] always revealed to us new insights” (pg.218)¹¹. Green¹⁶ suggests a shift in arts curriculum to include project-based curriculum leading to “innovative” (pg.78)⁴ thinking and what Dewey refers to

crafting to critical thinking depending on an individual teacher’s aptitude. Kalin and Barney argue “curriculum development is experiencing and arrested development” because it relies on “outdated, causal models of learning in order to assume greater certainty, predictability and control over learning” and art curriculum should be more like a “participatory contemporary art project” (pg.20)¹⁸.

The Role of Arts Curriculum in the Conceptual Age

Greene¹⁹, Noddings⁷, Siegesmund²⁰, Sousanis²¹, Pink¹ and the American President’s committee on the Arts and Humanities²² argue for art to teach beyond aesthetics and skill.

and...

“Teaching the arts in conjunction with language, history, and science, with the result that learning in both the arts and non-arts subjects is reinforced and enhanced”

The President’s committee on the Arts and Humanities, pg.38²²

Ignoring Art as...

an Academic Subject

It is argued that adding value never is about inputs, i.e. knowledge building as a resource; “added value is all about outputs ...”, (pg.41)²³ i.e. innovative results, e.g. better designed handicapped facilities or improved processes supporting collaboration and teamwork. Andriopolulos and Lowe (2000) argue, “ideas are a precious commodity and employees who produce them become sought-after resources” meanwhile governments are adapting curricula and “calling for creativity across all disciplines” (pg.48)¹². US Secretary of Education Arne Duncan argues, “in the global economy, creativity is essential” (pg.48)¹². Leaders of the developed countries recognize “creativity leads to innovation, and innovation leads to economic growth” and Gustina and Sweet conclude that art teachers have “a powerful impact on teaching and process in traditionally non-creative [academic] fields” (pg.52)¹² through the art’s academic faculty of innovative holistic thinking.



Ignoring Art Academically

continued...

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as, “flexible purposing” (pg.77)⁴. Orr, Yorke, and Blair¹⁷ suggest to reform curriculums, including academic ones, to take the form of project-based arts curriculum (2014).

The Role of Arts Curriculum in the Information Age

Noddings argues traditional education used art “specifically to induce feelings endorsed by the society [as defined by those in power]” (pg.81)⁷. Eisner⁴ argues that there has been no one approach in arts curriculum and the focus to have varied from

Green asks art education to employ a “sense of agency, even of power” because it “can open doors and move persons to transform” (pg.150)¹⁹. Pink¹ argues the conceptual worker will have to be able to combine logic, empathy and creative skills to innovate.

Gustina and Sweet (pg.49)¹² suggest we change education altogether using art curriculum as a means to teach all curricula because,

“creativity has become necessary to economic competition, and therefore crucial to governments that wish to keep their countries viable in a global economy”.

Project Based Arts Curriculum for....

Teaching Holistic Thinking?

Can art teachers demystify the artistic processes as Green suggests, by “reconceptualising art education” (pg.80)¹⁶ through project based art? An education methodology that teaches for criti-

cal thinking strategies, teaches to “analyze data, identify assumptions, infer solutions, apply the acquired information ... and finally to conceptualize” (pg.81)¹⁶. In a traditionally considered academic subject one looks at the parts rather than at the way “those [cross academic subjects’] parts interact with each other” (pg.76)⁴. Students of mathematics search for predefined answers not of their own to which they will be judged as right or wrong, see Clausewitz’s notion stated earlier. In art on the other hand, answers are practically limitless, enabling and driving innovative solutions to come forth⁴. One can thus suggest that art’s way of working is output rather than input oriented. In continuation of this argument, art seems to offer the academic faculty of holistic innovation and fill a gap for future success as no other academic subject offers.

Crossing Borders

Pitcher argues the “character of the artist and the nature of his or her enterprise” is not “dissimilar to visionary leadership” (pg.225)¹¹. She questions if all great artist and visionaries are “nuts” and concludes, “no”. If we “[... think of great artists and visionaries] they are abnormal in the same sense that someone seven feet tall is”. She argues artist types of managers are “nonconformist, like complexity and disorder...and score higher on tests of intuition” (pg.223)¹¹, which appears precisely to be allowing them to think holistically and innovatively. In art, students are asked to look at the work of others without being called cheaters: They are encouraged to walk around, get their own materials and they are free to be flexible in thought and behaviour⁴. In art students are also required to experiment with materials and cross academic borders in search of information to use as “media when they mediate” (pg.80)⁴ an idea or innovation. Businesses need creative artistic abilities to cross borders.

Educating for...

Innovation

“Classroom life in the arts does not usually resemble life in academic classrooms ... the interacting forces create a cognitive culture” resulting in the ability “to create satisfying and expressive relationships among the “parts” that constitute a whole”

Eisner, ppg.74-75⁴

Gustina and Sweet suggest the need for creative teachers to teach creativity, not just in art class but also across curriculum supporting more innovation in the traditionally considered academics¹². They suggest it would support healthier world economies and better business practices. It is suggested since computers have seemingly taken over the field of logic and math, the driving competitive factor in a company is its innovation¹. It is further suggested educational facilities practice the “inclusion of art and design teachers in discussions about meaningful educational practices” (pg.52)¹². It is argued that empathy gives us the ability to create well-informed innovative designs because we are better able to understand the needs of others and consequently we improve society (Noddings⁷; Pink¹). Art class offers a place of flexible dialogue and narrative in the search of innovation⁴.

Educating for Empathy

Project-based art is often designed to open dialogue about social issues¹⁶ and this would seem to correspond with developing moral thinkers and people “who feel cared for and who have learned to care for others” (pg.38)⁷, or what Pink calls “empathizers” (pg.49)¹. Pink argues conceptual workers will need to not

only be creative but also empathetic to succeed. Noddings argues if we where to “manifest” care into curriculum without “reducing the intellectual dimension” (pg.38)⁷ we could create a more empathetic people. Gibb suggests the philosophy of project-based art curriculum (pg.237)²⁴ creates an environment where students “have ownership of the space, they have ownership of the materials they’re using and the equipment that they’re using” (pg.14)²⁵. Sousanis²¹ also argues that ownership creates a sense of caring for something. It could be argued, in light of the above-mentioned arguments, project based arts curriculum teaches for holistic thinking, combing left and right brain attributes, of analytical thinking and empathetic creative thinking resulting in the ability to create innovative solutions.

Arts as...

an Academic

It has been argued empathy and innovation are economically beneficial for society¹² and are naturally supported in art education.

“High-quality arts programs can move youth away from dangerous or criminal activities and toward better education and better jobs”

President’s committee on the Arts and Humanities, (pg.39)²²

The faculty of art appears clearly to create innovative students that create innovative solutions, i.e. economic and societal, through holistic thinking. As the faculty of art furthermore makes use of academic subjects, e.g. mathematics and geography, as means to innovative solutions it is argued that art claims with right to be included in the body of academic subjects.

“Change ripples across industries, geographies, and sectors without regard for borders...[and] designing innovative options requires more than the traditional analytical and decision making skills”

Milton Friedman (pg.489 cited by Adler)³

Conclusion

Does the age-old adage (usually attributed to Aristotle, 384-322 BBC) that the whole is greater than the sum of its parts refer to holistic thinking? Smuts founded the theory of holism and argued “creative evolution synthesizes from the parts a new entity not only different from them, but quite transcending them” (pg.342)²⁶. It is argued that holistic thinking also includes using both the left and right side of the brain (Leeds⁸; Pink¹) and de Bono refers to as “analysis thinking versus design thinking” (pg.16)⁹. Furthermore Eisner argues art teaches for “flexible purposing” (pg.79)⁴ encouraging innovative output and Adler³ argues developed countries will have to become more innovative to remain competitive in the future world economies. Adler’s notion finds support in Pink’s argument that Drucker’s society of knowledge workers will have to become “creators and empathizers” (pg.49)¹ to succeed and find personal fulfillment. In support of teaching empathy, Noddings⁷ argues to implement a curriculum of care, an idea that finds support in Green’s¹⁶ argument for using project-based arts to further develop healthy societies.

If we are experiencing a paradigm shift from the age of information¹⁰ to the conceptual age¹ and our future depends on developing our creative and empathetic senses, what will be the consequence of ignoring art academically? According to George Monbiot (2003), by 2015 Europe is predicted to “lose 1.2 million jobs [knowledge worker jobs] to offshore locales” (pg.30)¹ and automation “will destroy many [analytical thinking jobs] and reshape the rest” (pg.44)¹. In the western developed world we enjoy economic success today and have raised our standard of living with an abundance of goods to choose from in our leisure. Consequently we also look to fulfil our right brain sensitivities; i.e. “beauty, spirituality and emotion” (pg.33)¹ through the search of meaning and aesthetics³.

It would seem that to develop and maintain a successful and satisfied

future society; we will need to be innovative and empathetic (Drucker¹⁰, Pink¹). There has been much support from governmental world leaders in the idea to utilize the academic arts to attain holistic innovative and empathetic thinking and Eisner argues how art education supports the above ideas. Businesses apparently are following world leaders advise as the



What will be the COST of ignoring art academically?

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“numbers of corporate leaders bringing artist and artistic processes into their companies” increases steadily (pg.487)³. This article was not able to answer who does not accept art as an academic but, much support was found for why it should not be ignored as an academic subject.

Much support has been found that we may indeed enter a conceptual age and questions rise as to why more educational facilities are not responding. It appears as if some educational administrators not only ignore the importance of art as an academic but also misinform parents and communities.

The perspective of creating innovative students suggests educational institutions must also be innovative and creative requiring creative innovative administrators who will inform and lead communities. If art is all inclusive of traditionally accepted academics then it only makes sense that art is an academic and would imply that only

uninformed people would ignore art academically.

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References:

- ¹Pink, D. H. (2006). *A Whole New Mind*. New York: Riverhead Books.
- ²Levitt, T. (1986). *The Marketing Imagination*. 1st ed. New York: Free Press.
- ³Adler, N. (2006). *The Arts & Leadership: Now That We Can Do Anything, What Will We Do?.* *Academy of Management Learning & Education*, 5(4), pp.486-499
- ⁴Eisner, E. (2002). *The Arts and the Creation of Mind*. New Haven: Yale University Press. pg.76.
- ⁵Clausewitz, C., Howard, M. and Paret, P. (1976). *On War*. 1st ed. Princeton, N.J.: Princeton University Press., pg.147

- ⁶ Mullen, A.M. (2012). *Military Strategy*.
- ⁷ Noddings, N. (2002). *Educating Moral People*. New York, NY [u.a.]: Teachers College Press.
- ⁸ Leeds, D. (2000). *The 7 Powers of Questions*. 1st ed. New York, N.Y.: Berkley Pub. Group.
- ⁹ De Bono, E. (1993). *Teach your child how to think*. 1st ed. New York, N.Y.: Viking.
- ¹⁰ Drucker, P. (2003). *The New Realities*. 1st ed. New Brunswick, U.S.A.: Transaction Publishers and in (1999). *Knowledge-Worker Productivity: The Biggest Challenge*. California management review, 41(2). 79-94. Retrieved January 23, 2010, from ABI/INFORM Global. (Document ID: 39818809).
- ¹¹ Pitcher, P. (1997). *The Drama of Leadership*. 1st ed. New York: John Wiley.
- ¹² Gustina, C. and Sweet, R. (2014). *Creatives Teaching Creativity*. International Journal of Art & Design Education, [online] 33(1), pp.46--54. Available at: <http://onlinelibrary.wiley.com> [Accessed 2014].
- ¹³ Greenspan, A., (1997). *Speech at The University of Connecticut*.
- ¹⁴ Arnheim, R., (1969). *Visual Thinking*, Berkeley: University of California Press.
- ¹⁵ Dewey, J. (1934). *Art as Experience*. 1st ed. New York: Minton, Balch & Company and in (2008). *Democracy and Education*. 1st ed. Radford, Virginia: Wilder Publications.
- ¹⁶ Green, G. (1999). *New genre public art education*. Art Journal, pp.80--83.
- ¹⁷ Orr, S., Yorke, M. and Blair, B. (2014). 'The Answer is Brought About From Within You': A Student-Centred Perspective on Pedagogy in Art and Design. International Journal of Art & Design Education, 33 (1), pp. 32--45.
- ¹⁸ Kalin, N. M. and Barney, D. T. (2014). *Hunting for Monsters: Visual Arts Curriculum as Agonistic Inquiry*. International Journal of Art & Design Education, 33 (1), pp. 19--31
- ¹⁹ Greene, M. (1995). *Releasing the imagination: essays on education, the arts, and social change*. San Francisco, Jossey-Bass Publishers.
- ²⁰ Siegesmund, R. and Cahnmann-Taylor, M. (2008). *The Tensions of Arts-based Research in Education Reconsidered, The promise for Practice*. In: Siegesmund, R. and Cahnmann-Taylor, M. eds. (2008). *Arts-based research in education*. New York: Routledge., pp. 231-246.
- ²¹ Sousanis, N. (2013). *Creativity Reconsidered: Incorporating Care. Interactive Discourse – The International Online Journal of Learning and Teaching in Higher Education*, 3: SPECIAL ISSUE on Creativity and Emotional Wellbeing (July 2011), Available from: doi: ISSN 1756-3445, Edited by Diarmuid McAuliffe & Lisa McAuliffe [Accessed: 26 Nov 2013].
- ²² President's Committee on the Arts and Humanities. (2012). 1st ed. [e-book] Washington, DC: NGA Center for Best Practices, pp.1-52. Available at: <http://www.pcah.gov/resources/new-engines-growth-five-roles-arts-culture-and-design> [Accessed 5 May. 2014].
- ²³ Kearns, P. (2007). *The value motive*. 1st ed. Chichester, England: John Wiley & Sons.
- ²⁴ Gibb, C. (2012). *Room 13: The Movement and International Network*. International Journal of Art & Design Education, 31 (3), pp. 237--244.
- ²⁵ NESTA. (2006). *Room 13 – A Case Study*. [report] NESTA, pp. 1-16.
- ²⁶ Smuts, J. (1926). *Holism and Evolution*. 1st ed. New York: Macmillan Co.
- ²⁷ McMillan, C., Mullen, T. and Paton, S. (2007). *Operations management*. 1st ed. Glasgow: Graduate School of Business, University of Strathclyde.