ORGANIC CITY

Research Note on Environmental Art

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In setting out to conduct this course on Environmental Art, which creates an art object (or more than one), some questions were raised as the starting point, in order to put depth and focus into the art project. Some of these questions are conceptual while some relate to practices. The results of this research inform the design and preparation of the course. These questions have been put into four broad categories.

JMW Turner, Landscape with Lake and Fallen Tree

I. Concepts – Environment, Art, Technology, Science, Culture

1.   What is Environmental Art? What kinds of artworks are included in the category Environmental Art? What concepts have they used and in which mediums?

The term *Environmental Art* is taken to be art which is about themes in the environment or nature. It may have insights into the environment or it may make use of environmental or natural phenomena or materials, in either urban or rural settings. Environmental Art may also be about recycling, the relationship of people and environment, energy, electricity, plants, consumer culture, or urban life.

Robert Smithson, Spiral Jetty

There are a number of terms in addition to Environmental Art which overlap in terms concepts and artworks, but they are conceptually different from each other. Environmental Art may include:

- Landscape Painting (from the 18th century)
- Land Art
- Eco Art
- Space Art
- *Garbage Art* makes use of garbage and waste to make artworks.

Phoebe Washburn, Tickle the Shitstem

We may also insist that these elements be present as part of the environmental artwork:

- the artwork may be a *functional* piece of equipment
- that it be located in a specific geographical area
- that it contributes positively to its geographical area
- that it deal with themes of energy, water, air, noise, weather, sunlight, waste, and so on.
- that the viewers or participants gain some knowledge of the environment in experiencing the artwork

Some examples may be seen in the pictures.
Further reference can be had from the Guggenheim Museum, Green Museum and Wikipedia.

Nyaba Ouedraogo, Hell of Copper

2.   What is Art? What is the understanding of art? What is the role of art and culture, art and society?

The meaning of the *Art* has varied much over time. While in the past it may have implied a skilful drawing, sculpture, performance or literature, or one bordering on making skilled crafts, it is also a term loaded with meaning of a higher aesthetic (a conception of the beautiful) that may be embodied in the art object. Objects also contain the imprint and style of the artist as author, and may have been the conscious expression of the artist, a vehicle which carries a vision, of ways of looking at the world and society, or at the very least a result of the artist's doing.

Art is often *symbolic*, making a larger than usual impact on the mind. It can also provide insights into complex matters. Or it can be layered to provide rich interpretations. An artwork may be an *individual* work or *collaborative* and *participative*. *Public Art* gets a lot of exposure and has a dramatic impact on a large number of people, more so in an urban setting. This is because of the large number of people passing through the *public space*, as opposed to a private one, experience the work of art.

Marcel Duchamp, Bicycle Wheel

Modern concepts of art have moved back and forth between realist, figural, iconic and an-iconic representation, from psychologism to analysis from particular vantage points of what nature or society looks like from there. The advent of the abstract, the conceptual, and the movements of the early 20th century, surrealism, dadaism and fluxus, a great many approaches have been seen, which have constantly been redefining art. It is therefore not possible to define it any more, nor can art practices be described completely, as there are now open tasks allowing for more variations and new approaches. However, the business of art which requires patronage, exists, and its market, along with the system of galleries puts its own commercial pressures on the artists.

As hinted earlier, the boundaries are now blurred between art and xyz (any number of things) where this could be crafts, functionality, science, technology, environmental practice, design and so on, leading to an experimentation with new ideas, tools and machines that society, culture and technology, have made available. A strong social and political involvement may unequivocally be seen in many artists' works.

Nam June Paik

Art operates in culture in various ways. One is as a high culture, lofty aesthetic, for others to aspire to and copy. Art also operates in myriad forms in the many social and cultural configurations in any given unit, city, country, world. Increasingly, much has become a part of consumer culture and a tool for marketing and advertising serving large corporate entities. Much creativity goes into creation and design of consumer good albeit for a marketing purpose. Large corporate organizations also fund art and culture organizations to support the arts, but foremost to create a milieu for themselves. But this is also where we see technology as part of everyday culture: cable, TV, mobile, phone, internet, games, billboards, and so on.

Tim Hartman, Coffee Table

A tentative list of the functions of art may be:
1. aesthetic
2. symbolic, loaded with meaning
3. creative element in ordinary things including everyday technologies
4. Unusual uses, new uses, of new and also old, tools and technologies
5. Solutions to real problems
6. convey powerful messages about society, politics, existing problems and issues.

3. How are Art and Technology linked? How are Art and Science linked? How are Technology and Science linked? How are Science, Technology, Society and Culture linked?

Claes Oldenburg, Buried Bicycle

If a certain device is to reach the public it needs design which appeals to consumer. On the other hand, I the technical problem needs to be addressed creatively there may be the value of art there. If a problem or work that is identifies and understood by an artist who comes up with a solution that depends on technology. An artist investigates into what creative uses a set of tools and techniques and technology can be put to for a artistic goal which may be anything deemed by the artist.
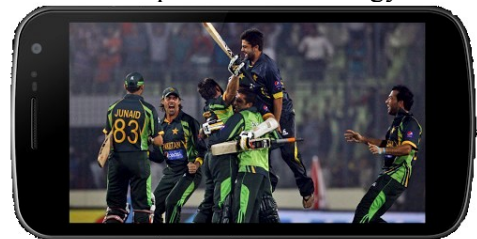

Finally, they certainly come together in all areas of image sciences, whether it is machines developed for medicine (scanners), communication (satellites), industry (3D printing), space, computers (Apple), software (Photoshop), satellite imaging or GPS.

If technology is understood to be the machines, equipment and set of tools used for specific purposes for specific tasks, Science is the knowledge-base which follows the Hypothetico-Deductive method.

There is no doubt that science is funded by large entities which also fund the agenda forming the priorities of the powerful countries, classes and lobbies, and so influencing the practice and agenda of science.

Technology in thus how products of engineering and design in applying the scientific knowledge find a place in society in culture. Electricity, cellphones, TVs, cars, oil and gas.
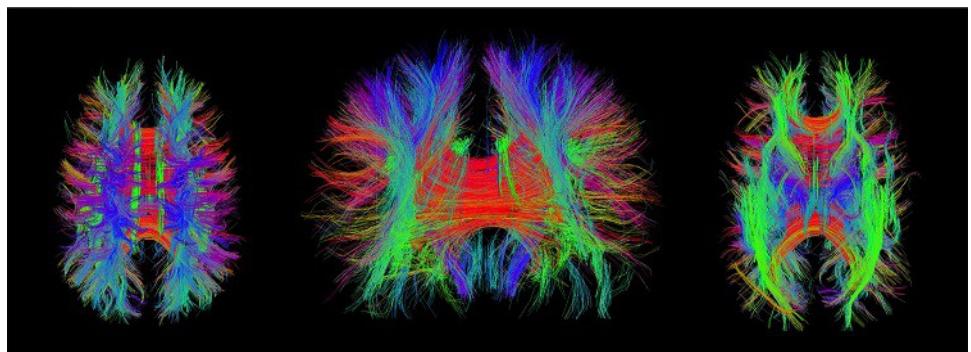
A research agenda by artists, for example, or by communities in Third World countries would look very different.

According to Sheila Jasanoff, the shift would move away from agenda-setting by corporate entities and universities, to one which is represented by and serves communities.

II. Strategies – Future, Social, Commons

4.   How should the course be designed so that it is relevant to the future, and how. What outcomes do we envisage.

According to Pierre Bourdieu, power relations maintain themselves through *cultural reproduction*, which takes place in the education system. The school then is the place where this reproduction takes place, along with other venues and institutions where cultural transmission takes place from generation to generation. Education helps reproduce society and its social relations.

If the school and curriculum, including particularly classroom practices, restrict thinking, students have to move away from the routine and habits of thinking, to be able to think freely and creatively. If significant change is to take place, then adequate space, energy and activity are needed to withstand the pressures of institutions in society over time.

These sessions are intended to provide a regular space which is a small but radical break from the school routine, the everyday routine, the ways of thinking, acting and behaving in society. In this approach the classroom becomes a laboratory for creating a future. Students will be engaged in play, trying out new and different activities and working out consequences of things.

If we take a cue from Baudrillard's *implosion,* then the students will find it useful to question their information and knowledge in their physical and more importantly mental and virtual environments, and chart their own course through the information-intensive media world they find themselves in.

In *De-schooling Society* Ivan Illich suggests that networks which encourage and provide opportunities and resources for learning, are more useful than the effect that institutionally rigid schools have on individuals. In effect this is an opportunity for the author to provide such network connection to resources in the city and beyond.

He says: *"The most radical alternative to school would be a network or service which gave each man the same opportunity to share his current concern with others motivated by the same concern."*

The question remains about how well they will be able to use their resources and technologies, including the internet, which can make available any information (and ways to communicate and network with others) that a student may think of.

It is envisaged that the students will find some of the creative energy and confidence in consciously doing, to be something useful over time, as much as it is geared towards urging students to make a knowledgeable and active difference in their environment.

5.   Given the marginal social and geographic place that forms their community in Hijrat Colony, what educational and empowering strategies must become part of the overall approach in the course.

In addition to the opportunity offered by *networks of learning,* as suggested by Illich above, the approach of Paolo Freire in *Pedagogy of the Oppressed* might be useful here. He suggests that illiterate people who are from the margins and powerless, find it of most interest to learn to read if the topic, the idea being written is about politics that they have to live with everyday. In this way learning to write 'water' can be an empowering experience for the learner.

In the current context, it would then be useful to pick issues and topics from everyday lives of the students, and from their immediate environments, that are significant for them, and take those as points of departure into the art project.

Urban geographers suggest that despite the geographical specificness and segregation of communities, city life offers opportunities of going outside one's worldview. The challenge is to have access to such urban connections, networks and commons, and to be able to make use of them. Illich made a similar point as stated above.

6.   What are the merits and demerits of learning and doing in a group as opposed to individual learning and projects by students. What would be involved in doing collaboration work, given current conditions? How is collaborative learning linked to the Commons, publicness and one's neighborhood and networks?

A short comparison of merits and demerits of individualized versus group learning:

Individual	*Group*
+ independent learning	+ shared knowledge and brain power
+ independent Thinking	+ shared research and support
+ critical thinking	+ learning from each other multiplier
+ searching out resources on one's own	+ many tasks can be done faster
- may be too limited in scope	- needs coordination managing
- may not benefit from critique	- unwieldy if too big
- harder to research resources and support	- some may learn more, some less
- more effort required	- work may get distributed unevenly
	- work may be divided

Conditions at Islamia School are better suited for quick learning and collaboration work. This is because there is insufficient time to follow individual learning, but it is possible to keep track of progress of individuals working together in small groups in class.

Secondly, given that this is training for working together later in life, when opportunities arise, whether in the neighborhood, the city, or elsewhere, it also prepares one to think and work for *the Commons*, for the p*ublic* good, through dialogue, and networks of knowledge. To some extent, this can be described as an open source moment, when something (the artwork) is being created through sharing and collaboration.

This also corroborates what was said in the last two sections, concerning the ideas of Illich and others.

III.   Learning & teaching approaches - Science, Technology, Environment & Art

*7.   What approaches have been developed to **teach Science, Technology and Art,** and what is the rationale, need and thinking behind them.*

There has been much thought given to disciplinary boundaries and their disappearance. C.P. Snow's two cultures are no longer distinct. Educator's are increasingly realizing the need to put Art and Science together.

In order to maintain technological competitiveness the STEM, Science, Technology, Engineering and Mathematics approach in education policy, emphasizing their inter-connections is being advocated in the US.

At the same time Georgette Yakman advocates adding arts and design to STEM, making it STEAM, or Science, Technology, Engineering, Arts and Mathematics. This approach is brought together in this way: "Science and Technology, interpreted through Engineering and the Arts, all based in elements of Mathematics".

There is however still a point to be made about the society. Technology comes out of science as practice, which in turn has consequences for science and culture. As pointed out earlier there are flaws and problems. In education, the Science, Technology and Society STS approach addresses these by studying the issues together. Wikipedia describes it as the "study of how social, political, and cultural values affect scientific research and technological innovation, and how these, in turn, affect society, politics and culture.

In order to foster creativity in Art and Science, in a world brimming with digital technologies, new media and software, there are many government and privately funded initiatives referred to as Innovation Labs, Incubators or Media Labs. Big or small, they are the experimenters in creativity combining arts and technologies, with many entrepreneurs in the mix. Fab Labs or fabrication labs are where one might use a 3D printer to make real objects and sculptures from digital sources.

While engineering and the use of technology in society solve but also create real world technological problems, including those related to the environment, artists have engaged with and provided solutions to such problems with creative insights and vision combined with technological competence.

What has been done rarely in classrooms is applying this approach in classrooms. In the current course we intend to take a similar approach, where students will be able to brainstorm, design and create technological objects.

*8.   What approaches exist in **popular and consumer culture** which might inform us about how to involve technological solutions in a school and community project. (Magazines, DIY, consumer gadgets, ICTs, new and social media).*

With the spread of education, technological knowledge is now commonplace and part of popular culture.

A few movements have emerged since the sixties which rely on self-help, learning and doing, with roots going back to the co-ops and communes much before. Among these is the *Do-It-Yourself* or DIY movement which has helped to propel the trend of learning and experimenting with science and techniques, and the emergence of *Maker Culture*.

There is a long tradition of independent inventors, experimenters, as well as those looking for wealthy patrons, much like artists. Parallel to this is the popular interest in science magazines like Popular Science, Nature and Scientific American, and also environment-focused ones like Nat Geo, Discovery and Sierra Club. Pakistan has popular science magazines in Urdu.

IV. Classroom Strategies

9.   *How can objects, devices and material be used in classroom learning and instruction* *especially on the subjects of environment, technology and art? How can the exposure of students to knowledge **about current trends and immediate environment** be radically enhanced? How can students be empowered to use these?*

To gain insight into a subject matter, participation in critical discussion about a topic, an object, picture, a concept or video, is crucial. It helps if the subject being shown and talked bout has personal appeal. Friere's method was to start with terms which were of political significance to the illiterate weak, and thus involving huge personal stakes, leading to empowerment in being able to write, plan, discuss it.

Using a variety of teaching aids, each of which pin points or highlights one or more aspects of a topic, in a powerful way, can be helpful in substituting for a real personal experience of the same. This can be a use of film clips, internet (Vimeo, Youtube) videos, websites, software (Google Map, Google Earth) news reports and footage, reference to significant events that affected a large number of people, and use subject matter which dramatically expands the horizons of understanding and knowledge of the students with a wonder factor. Picture of the environment, neighborhood or from the students personal experience, taken by them can be and effective way to engage them personally in the discussion. Freire's method can be applied in the discussion maintaining the personal -political significance of the concept of the topic. In this way going from not only over the concept and topic but also the gadget, website, software (technology), students, capacity and confidence or dramatically enhanced through active involvement which expands their field of possible engagement

10.   *Given the relatively low level of knowledge about environment, technology and art, how can these be introduced while students gain proficiency in these areas, both in terms of knowledge and in the experience of building creative technological solutions, as art.*

Practical knowledge can best be learned through practical experience. This will require demos on actual objects. simulations or scale models and videos can substitute but to only a limited extend. The experience of working with others in a particular environment, space or situation cannot be substituted. Knowledge of an immediate problem from the students experience can raise the stakes and involvement, to make the classroom demo and discussion directly relevant.

If energy is the topic, alternative ways of generating, for example, through a solar panel or dynamo may be demonstrated, or an expert with a model called in. Science and technology toys are also available for classroom or home use.

11.   *How to plan the project so that before we start building the artwork, students reach a high minimum level of knowledge of the environment and related technologies, in order to design and make an informed project.*

It may be necessary to
- Raise interest of the students
- Engage the students in exploring the limits of their knowledge and experience
- Raise the level of knowledge of the students.

This can be an initial component designed to increase students' knowledge of topics and issues, followed by practical activity such as making, creating and doing. It would by design focus on collective brainstorming, exploring ideas that appeal to students, their environment, and topics that fascinate them.

*12. Assuming a low understanding of the areas of the environment, art and technology, what **topic strategies** would be best suited to the classroom at Islamia School.*

In thinking about how to introduce creating an artwork that would fall under the category of environmental art to students of Islamia School in Hijrat Colony, , it was felt that an understanding of both environment and art was necessary. There were many connections that could be followed, such as the ethics of environment and political issues in art.

However it was felt that the most suitable path for students to follow would be a line of thinking that started from familiar ground and led down somewhat familiar road. Nature's universal affective, aesthetic, complexity and richness of material was felt to be best starting point. Then the path would diverge into the idea of the uniqueness of Earth as a planet in the universe, leading to topics of weather, climate and delicateness of the environment on the one hand, and the beautiful, the awe-inspiring, the wonderful and Art on the other. At this point a discussion of the value and obligation that such these things create as valued in cosmological and religious views, would bring things together.

Nature	➜	Environment
	➜	Aesthetics, Art
	➜	Values, Islam

*13. What environmentally friendly criteria should we use in choosing **materials**?*

- Avoid materials and processes which by themselves or through waste or byproduct generated will damage the environment or the people

- Reuse waste that already exists.

- Use materials that may be reused later by others.

- Use materials and objects that may be used repeatedly over a longer period of time rather than single use or disposable.

- Use material which are biodegradable

- learn about material, how they produced and whether this causes the damage to environment or people. If so, redesign to use something else

- learn about disposal, how material will be disposed off safely. If not redesign to use different materials

- Reduce dependance on external sources of energy especially those carbon based.

Conclusion

This report details some of the ideas and thinking that form the background in designing the workshops on *Environmental Art,* at Islamia School, Hijrat Colony.

This workshop raises awareness about environment, ecology, environmental relationships, and the role ordinary people can take as active citizens. These ideas will inspire the artworks. In the process students will learn new skills, and the ability to be able to control things in their own environment. In turn they would raise awareness of other people around them.

References

- Ivan Illich, *Deschooling Society.*
- Pierre Bourdieu in *Key Concepts in Cultural Theory*, eds. A. Edgar & P. Sedgwick.
- Paulo Freire, *Pedagogy of the Oppressed.*
- Jean Baudrillard
- Christiane Paul, *Digital Art.*
- Tony Godfrey, *Conceptual Art.*
- Sheila Jasonoff
- and numerous websites.

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