

*Approaches to Digital Visual Arts Through Design
Iteration*

Safa Tharib

Iterative design is an approach to a project that is built on a cyclic process of recurrence. The method is connected to the practice of computer programming and the phrase has been used in computer science since 1990 (Gossain and Anderson, 1990). This article frames cyclic iterative methods as well suited to the ever-changing field of digital visual arts. Design iteration opposed to iterative design can be used as umbrella term to describe all repeated cyclic approaches. Artistic disciplines which embrace the use of digital methods within the creative arts present themselves with more possibilities in terms of design iteration than traditional methods. The idea of working non-destructively in digital modes is appealing in the application of testing and exploring new ideas on an existing piece of work. This applies to digital video, drawing and 3D modelling. The very nature of digital methods invites reflective questioning at each stage towards the final outcome of the works. De Bono's approaches to lateral thinking offers tools that aid with and inform on the ideation of a project and methods to harvest the generated ideas from the use of the cognitive tools he propositions (De Bono, 1970). When we consider De Bono's approaches to digital arts specifically the lack of physical form digital mediums has presents us with a fluid mode of working that can be constantly tweaked and iterated on at nearly every stage of production if not every stage. The process itself undulates between states of iteration and reiteration due to the ability to undo and redo changes. This is opposed to the more rigid forms that analogue mediums take wherein, iteration is destructive with each change working on top of a previous state without the ability to go back.

The idea of modular cyclic methods being used in digital mediums has been widely adopted in software development. Agile Scrum methods have proved themselves to be effective in handling large consumer facing projects such as video games by modularising the project into smaller manageable parts know as sprints (Schwaber and Beedle, 2001). That said, this is not

an iterative approach and often requires at least a tentative technical plan of the overall project to be able to be implemented. Moreover, the Scrum method speaks more closely with software based commercial projects rather than visual research, the former gleaned more from a quantitative approach with the applied sense of being done with a certain task and moving on to the next. Sullivan describes the research pursuit of visual arts as a 'critical inquiry that responds to research demands by exploring the unknown' (Sullivan, 2006). An explorative study conducted with a practice based visual arts approach does not have the liberty of being able to gain a sense of the overall project in a manner that would allow for various components to be separated into sprints. De Bono's lateral thinking approaches allow for creative outcomes that one would not normally expect such as using the sense of smell to correlate with a photocopy machine running out of paper through random word associations (De Bono, 1992). That said, lateral thinking opens up a mode of study to more questions through movement techniques that offer more branches of investigation as the method is applied. As previously stated, the practice of digital visual arts allows for a previously unprecedented level of iteration. This maybe unappealing to commercial or visual research projects with strict time limits.

We must consider the practice of visual arts has changed and evolved. One such example could be the comparison between traditional sculpture to 3D digital sculpture in the very fact that traditional methods of sculpture do not allow for the undo and redo functionally that 3D digital sculpture does. Moreover, in the medium of 3D digital sculpture large details can be further tweaked and adjusted throughout the creative process through the use of sub-division levels, while major changes to the volume of an artefact in the traditional realm would be near to impossible due to the destructive approach the medium requires. The benefits of such medium work well in an exploratory sense to the relative ease one has in changing the form to meet the demands of a study as it evolves. That said, we can now consider new iterative approaches when working with what can be considered shapeless digital mediums that may not have been possible before. The idea of shapelessness in the medium corresponds with the pursuit of an explorative study into something that is unknown. Reflective practices such as Borton's learning cycle of what, so what and what now? Popularised in his book *Reach, Touch, and Teach* (Borton, 2014) Borton's methods have been widely used by nursing professionals to gain qualitative understandings of their patients (Girod, 2002). Kolb's reflective model allows for information to be turned into usable knowledge through experience, observation and the formation of concepts that can be applied to teaching practices (Kolb, 1984). Gibbs' reflective model allows for analytical understandings of a situation as well as feelings in regard to that situation to form an evaluation of the work or situation. Gibbs' model can be explained as starting with a factual description of an event, then addressing feelings of said event. The overall experience is evaluated with distinctions made in regard to both good and bad points

of the event. The event is then analysed and explained. Then the approach to the event is analysed and finally an action plan is created and the cycle begins again (Gibbs, 2013). While this model was not created for the practice of digital visual arts it can be applied by positioning the artefact in place of the subject. Wherein, one would assess the qualities of the work through an auto-ethnographic approach that starts with addressing the superficial details in place of the description. We then move on to state our feelings towards that artefact and evaluate it by stating the good and bad points of it. The analysis then focuses in on how well it communicates our intentions and the second analysis addresses what more could be done to better communicate these intentions. Finally, we develop key points of change and begin the cycle again.

When to stop the iterative process becomes a new problem in creative digital works. To interrogate this notion, we could consider Bazin's theory of objective reality in terms of the visual aspects of digital image wherein the images themselves create their own reality (Andrew and Younger, 2012). This idea is highly problematic when we consider how much and to what extent iteration and reworking of an image has occurred between its inception to final image. Ignoring the fact that no part of the image necessarily has objectively real elements, the time itself is still contained within a specific time of human understandings of art and design. The idea of objective reality within the image is likely gone in a pure sense as described by Bazin. Bazin himself took issue with lighting and built sets of cinematic works stating that reality is not acknowledged in such works (Morgan, 2006). That said, iterating on works after they have been released to the public sphere has now become common place in films, printed media and video games. Digital artefacts now exist in a creative sphere wherein they can be iterated upon with or even without the original collaborators.

The idea that a work within the realm of visual arts is ever truly complete is fading. The very nature of working within digital forms now allows for constant tweaking and reiteration seemingly at any stage and at any point. Digital works themselves present an ever-evolving artefact due to the lack of physicality of the piece. Where new and repurposed cyclic methods based on the idea of design iteration can be applied and should be further explored within the context of the practice.

References

- Andrew, D. and Younger, P. (2012) 'André Bazin, What is Cinema?', translated by Timothy Barnard, Montréal, Caboose, 2009.', *Cinémas: Revue d'études cinématographiques*, 20(1). doi: 10.7202/039279ar.

- De Bono, E. (1970) *Lateral Thinking: A Textbook of Creativity*, Penguin Books.
- De Bono, E. (1992) *Serious Creativity: Using the Power of Lateral Thinking to Create New Ideas, Organizational Dynamics*.
- Borton, T. (2014) 'Reach touch and teach', *Nurse Education Today*, 34(4).
- Gibbs, G. (2013) *Learning by doing: A guide to teaching and learning methods, Instructional-Design Theories and Models: A New Paradigm of Instructional Theory*.
- Girot, E. (2002) 'Critical Reflection for Nursing and the Helping Professions: A User's Guide', *Nurse Education Today*, 22(5). doi: 10.1054/nedt.2001.0768.
- Gossain, S. and Anderson, B. (1990) 'An Iterative-Design Model for Reusable Object-Oriented Software', *ACM SIGPLAN Notices*, 25(10). doi: 10.1145/97946.97949.
- Kolb, D. A. (1984) 'Experiential Learning: Experience as The Source of Learning and Development', *Prentice Hall, Inc.*, (1984). doi: 10.1016/B978-0-7506-7223-8.50017-4.
- Morgan, D. (2006) 'Rethinking bazin: Ontology and realist aesthetics', *Critical Inquiry*. doi: 10.1086/505375.
- Schwaber, K. and Beedle, M. (2001) *Agile Software Development with Scrum*, cdswebcernch.
- Sullivan, G. (2006) 'Research Acts in Art Practice', *Studies in Art Education*, 48(1). doi: 10.1080/00393541.2006.11650497.