

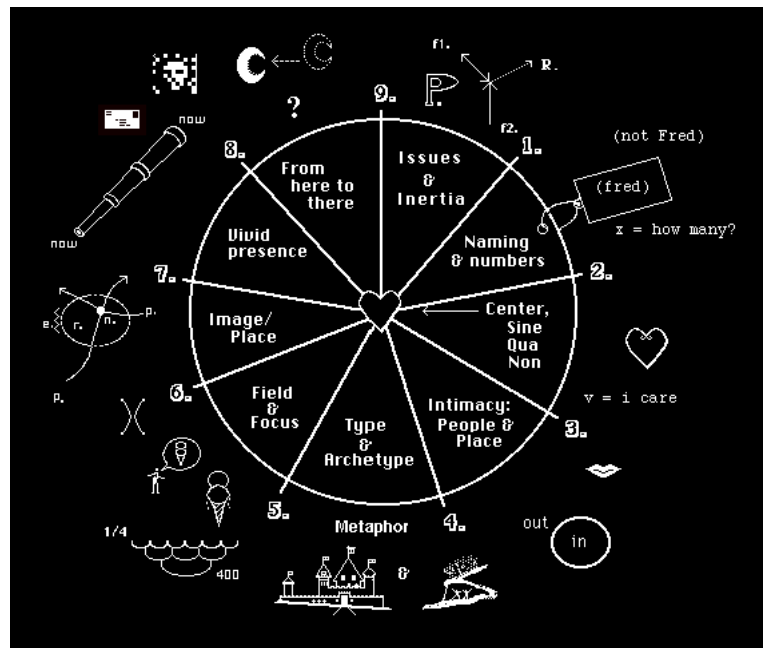
Designer PiE: A Learning Model for Designers

by Jerome Diethelm

Give a person a fish and they have a temporary if somewhat slippery delight, but teach them about fishing – it's an old saw but one I think gets right to the heart of teaching environmental design. Design instructors who can't resist handing out solutions and flashing their own (no doubt formidable) design ideas and skills are really no better than the parents who always tie their kids shoes. It may seem an odd way to put it, but one basic reason for the long-standing dependence on the design studio as an educational format is that it provides a very effective social setting for learning to tie one's own shoes and catch one's own fish.

Teaching about learning is not a new educational concept, but it often gets lost in design education in the old tug of war between the process and the product. Avoiding this problem requires the instructor to see studio creation as a stepping up in logical type – a setting up of the setting and a promoting of conscious insight into an unfolding process. It requires that everyone involved develop a standing back awareness that both process education and design product are tied into the longer perspective of students becoming creatively able, effective and independent.

While it's always good to experience some success at making something or someplace, nothing takes the place of a growing personal confidence of knowing what to do, how to proceed, what to expect, what to look for, and what to do when things get stuck. Nothing beats the transferable feeling of having done it before and can do it again.



Designer PiE

In design, not just always relying on the seat of your pants is called theory. And one branch of theory is the development of intellectual tools that facilitate design process, sometimes referred to as design methods. Experience has cautioned us to not expect creative processes to be easily reduced to rigid routines or algorithms. Teaching experience also confirms the truth that people work, think, learn and create in many different ways and that there is no such thing as “the design process.” It is nevertheless still very useful to try to model the experience of designing, and has only proven dangerous for the mentally rigid.

By modeling I mean the fundamental mental process of abstracting, simplifying and representing large amounts of information. The object of modeling generally is to reduce very complex systems and circumstances – in this case creative process - to useful schematics of key elements and relationships. In the complex world of ideas, places and processes the model's job is to adequately and economically represent the real thing so that it is possible to understand critical relationships, ask good questions and explore important possibilities.

The learning model for designers I call *Designer PiE* attempts to build cognitive structures of design process experience but does not just present the way, and definitely not any “timeless way” of thinking about design. Instead it is a collection of ways of thinking about design and designing. The *PiE* is a stepping up in logical type, a model of models. Its purpose is to structure, stimulate and guide thinking about design thinking.

A Model for Designers

Designer PiE: Ways of Thinking About Design is an attempt to answer such questions as: can a model, be developed which

stimulates and expands design thinking rather than boxing it in like most explicit frameworks and expert systems? What kind of intellectual tools do designers really need and can actually use? Are there any good guides to design comprehensiveness, any useful collections of ideas, concepts and processes that have proven useful and effective to others?

As a design studio instructor, I've noted the mental richness and wide-ranging diversity of ways students have of working and thinking about design problems. I've found that they exhibit an impressive range of styles, generally starting out their work in modes of thinking they feel most comfortable with and focusing on aspects of the work most related to their personal interests. Some are drawn immediately to the sensual; others to the social or the technical dimensions of their work. Some like to start small and work out; some are big picture and work in. Some pour out images and others stories. Some like to draw and diagram, others prefer to organize, and still others to calculate. All have their own ideas, ideals, opinions, and point of view they want to process and explore. Invariably they bring a wider variety of life experience to their projects than they realize and rarely are they aware of its importance or applicability. All of the above gives the lie and will surely prove fatal someday to that monolithic misconception known as "the design process."

Designer PiE is intended as a more open, respectful and useful model of design thinking. A key idea is to catch people where they like to think and then provide some ways to expand the range and depth of their considerations. A principle goal is to encourage and help designers cover more territory and to dig deeper into that ground. The aim is to increase the "aboutness" of a piece of work, i.e., to enable it to become more inclusive, comprehensive and insightful with respect to human experience. The companion to this is to catch them in the way they like to think and then expand their comfort zone with intellectual tools. A third idea is to explore the applicability and the limitations of theories and methods rather than promoting any one in particular. Perhaps research, analysis, synthesis, evaluation, a positivistic model from the sciences, is not the only way to describe designing.

There are times, for example, when Pattern Language is very useful and times when it is inappropriate, confusing and arcane. It can be helpful to think in terms of types and typologies but there are situations where the approach seems too conservative and limiting. Lynchian image design provides a useful symbolic vocabulary for some place representations, but has all the benefits and shortcomings of a high level of abstraction. Narrative structure can be a boon or a burden, a lyrical string of meaningful events or a too restrictive noose. Activity and behavioral approaches catch the species in motion, but when taken to an extreme, ignore the existence and denigrate the importance of human mental life. Some metaphors are impossible to live in - and so on.

A major objective of the models that make up the *PiE* is to avoid mechanizing and trivializing human creative process. This will disappoint old-time methodologists and all those who think that there are immediate, and unambiguous answers to such socially constructed questions as, So What's the Problem? My intention is try to convey how important it is to bring such questions to life in a rich cultural setting that enables a robust intellectual, historical and sensual perspective on the valuing experience.

Educationally *Designer PiE* is a structure for assimilating and accommodating design experience and theory - a model that promotes, represents and can be used to guide design learning. Its principle purpose is to stimulate, assist with and provide images of design thinking at all levels and stages of the design experience.

The *PiE* celebrates choice and mental process in environmental design but does not offer a formula for deciding or expressing. It offers personalized structures instead of algorithms and does not pretend to be an expert system. It is absurd of course to think that any model can capture all of design thinking. As it presently exists, the *PiE* is an open-ended mega-model, an ongoing process of gathering and organizing - modeling if you will - ways of thinking about design. It models some of the ways that have proved useful, some that are original, some that are experimental, and offers a place for many more to come. It welcomes contradictions, invites expansion and requires personalization. Only a model of models could even begin to keep track of the mental complexity of design thinking or provide the mnemonic structure needed to make it a useful tool.

Designer PiE is free to download and use for all students of design with access to a Macintosh computer.