

# Creating the Enriched Case: Using Aesthetics as an Alternative Approach to Designing a Multimedia Case

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## Abstract

In this paper we propose that aesthetics provides a useful, efficient approach for thinking about and creating representative scenarios within constructivist case studies. We suggest that complexity, richness and experiential fidelity of the case are functions of aesthetic issues. Our observations draw from the work of Eisner, Dewey, research in graphic design and architecture, our own academic training as artists, and a series of formative studies in which these ideas have been explored within actual instructional situations. Among the issues we have explored are use of the artist's voice, honesty in materials, the understanding of the distinction between medium and tool, and the creation of a unified experience.

**Keywords** — Case-based instruction, collaboration.

## 1. Introduction

By their nature, case studies represent an experience through which the learner can study, experiment and discuss a phenomenon without the liabilities of becoming engaged in a problem within an actual environment. Case studies provide students with the opportunity to share and investigate an experience and arrive at rich, meaningful conclusions. However, current approaches to the design of computer-based case studies are frequently inadequate and inconsistent. From a traditional instructional design perspective, the process of preparing a case study is typically defined in terms of specifying objectives, collecting and editing material, and presenting it clearly and unambiguously. We and others have criticized cases built using this approach as not being sufficiently experiential [4, 15, 1, 12]. Case studies created in this fashion focus on allowing the student to extract a message and then apply it to a new situation; the complexity of the case is reduced in order to achieve this goal. The student may assume that all

the pieces of the puzzle are present in the case; she has only to fit them together. The great effort that writing a good instructional case study requires is often not repaid in terms of rich, transferable experience.

Constructivists point to case studies as a means of providing an authentic context in which learning tasks may be embedded. However, there is a dearth of literature on how to create these authentic contexts. The Cognition and Technology Group at Vanderbilt state that the facts of a case ought to be embedded within a video narrative [5]. Yet, there is considerable difficulty in applying this guideline within an ill-structured subject domain where the "facts" of a case are unclear. Other researchers suggest that the density and bandwidth of multimedia may be used to represent the messiness and ambiguity of an authentic experience [e.g., 4, 17]. Yet, we question the efficiency of this approach. Designing the case may mean creating vast databases of information; much of the student's time is spent dealing with an inundation of data. Having to deal with masses of uninterpreted data can actually be constricting; one designer was compelled to add video essays to counteract this effect and to provide a "feel" for the location as seen by the filmmaker [13].

We believe that the "richness" and "lifelikeness", and experiential fidelity of a case have less to do with the amount of information provided and more to do with an aesthetic sensibility [16]. The messiness and complexity of an authentic context may neither sufficiently nor efficiently be represented by great quantities of data in a variety of media, but by the way the creators chose to arrange them. We suggest that aesthetics provides a useful, efficient approach for thinking about and creating representative scenarios within constructivist case studies. Our observations draw from the work of Eisner, Dewey, research in graphic design and architecture, our own academic training as artists, and a series of formative studies in which these ideas have been explored within actual instructional situations.

### 1.1. Aesthetics and instruction

When we refer to aesthetic strategies, we are referring to practices and ways of thinking inculcated in the fields of art and design. We are referring to the creative and cognitive processes involved in representing experiences within particular media. In cubist painting, for example, the fractured reality represented on the canvas conveys the world perceived from different times and different angles. Yet the artist integrates these perspectives into a unified whole which is representative of the artist's experience. Like a case study, the work refers to a real situation and offers a richness of perspectives. The work is transformed into an efficient, expressive object which creates an experience for a viewer. The artist does not simply create a pointer to the experience. Nor does the artist attempt to reconstitute the whole of reality and then ask the viewer to sort through it.

In our practice, features characteristic of artistic processes offer a useful, efficient framework for developing case studies within instructional situations. In this paper, we concentrate on three of these features:

- (1) The voice of the designer is explicitly acknowledged and nurtured.
- (2) The computer is seen not only as a tool, but as an expressive and experiential medium.
- (3) There is an emphasis on how the separate elements of the case "work" together to produce an integrated experience for the viewer.

## 2. Myth of the Voiceless Designer

In traditional instructional systems design (ISD), instructional designers typically conceive of a distinction between content and form. Content is seen as something that is instantiated within form. The subject matter expert provides the content and the instructional designer is charged with shaping that content into cohesive instruction. This distinction is a technological one because the designer attempts to use form to accomplish a purpose. Here, form is a kind of tool.

Debates on postmodernism have brought new outlooks to the discussion. One of the earmarks of post modernist perspectives is the inability to see form as something separate from content. But to a certain extent, form is a kind of content. There are no value-free, transcendent, transcultural forms within which we can communicate [2]. Instead, a medium, or a form of discourse is always value-laden and biased [3, 14]. The discourse—the form—shapes and informs the content itself. Thus the technological distinction breaks down. Form is no longer a tool, but inextricably linked with content. Eisner observes [9], "the meaning that representation carries is both constrained and made possible by the form of representation we employ. Not everything can be 'said' with anything."

An aesthetic approach contrasts with the technological content/form distinction of traditional ISD in that it sees the designer as having a particular voice in the instructional process. We are indeed co-creators of the content together with the subject matter experts. Therefore, the instructional designer's point of view, philosophy of instruction, outlook on life, sense of style, and personal preferences become a part of the design. The concept of "voice" implies a kind of self-knowledge, a knowledge of the self-in-the-world that informs the instructional design process. In her critique of the influence of post modernism and technology on the practice of graphic design, Wild [19] states that designers must abandon their role as master or expert in favor of that of collaborator, co-author, or participant. She maintains that the most pressing issue in design education today is the development of the young designer's voice and an acknowledgment, therefore, of the designer's more accountable role.

The designer's open acknowledgment of her voice helps face squarely criticisms of post modernism when applied to design tasks. Kampridis, in a re-examination of the meaning of the "postmodern aesthetic" [11] points out, "No single individual has the ability to choose from the totality of traditions as if s/he were equidistant from them....Re-appropriating the contents of traditions entails more than a shopping spree through the malls of cultural history." The tastes and habits of the designer must be made known, and be seen as determining factors—they are not merely conditions of design, they are also among the methods and techniques of design.

Why do we call the notion of voice in design "aesthetic"? Instead of seeing instructional strategies as a collection of tools that the designer applies to learning tasks and situations, the instructional designer must have some sense of his or her "voice" and use the strategies that work most closely in unison with this voice. This is not an attempt to aggrandize the designer; it is more of an acknowledgment of inevitability. The designer is like the painter Dewey [8] describes (p. 87)

*The painter did not approach the scene with an empty mind, but with a background of experiences long ago funded into capacities and likes, or with a commotion due to more recent experiences. He comes with a mind waiting, patient, willing to be impressed and yet not without bias and tendency in vision. . . The passionateness that marks observation goes with the development of the new form—it is the distinctly esthetic emotion that has been spoken of.*

The first author recently used the notion of voice in the creation of a multimedia simulation of a field trip. Rather than use the multi-vocal approach commonly advocated by constructivists in which various agents express their point of view, a single, first-person point of view was used. We found this rhetorical form more natural to use than a multi-vocal approach. Further, it seemed to us more honest for it dispelled any notion that we were trying to portray a truth outside of our own design. The end result was a compact (for multimedia) 10 MB product. Yet the product enabled students to draw a number of rich, meaningful, personalized interpretations and fed a lively discussion.

### 3. A view of Computerized Instruction

An aesthetic approach also provides an alternative means of considering computerized instruction. Advocates of constructivism, an instructional philosophy with roots in post modernism, suggest that instructional designers become toolmakers and resource-makers. For instance, Cunningham, Duffy and Knuth [6] have suggested that computers can serve to encourage and stimulate dialogue between students and represent individual and group constructions of knowledge. We agree that these can be meaningful instructional strategies. The aesthetic approach, however, sees the computer as a medium of experience, not simply a tool, or a means of mediating communication. Dewey [8] made this distinction in *Art as Experience* (p. 84):

*Science states meanings; art expresses them....The poetic as distinct from the prosaic, esthetic art as distinct from scientific, expression as distinct from statement, does something different from leading to an experience. It constitutes one.*

A computer can seem to embed experience if it is viewed as an aesthetic medium and not a tool. It is the way information is used that creates the experience. In the project mentioned earlier, the point of view expressed in the program did not simply involve portraying the information in text. Rather the point of view was presented in a collage of illustrations, text and sound. The person's intimate reflections were presented in a journal and his feelings about personal issues were conveyed in poetry within a virtual sculpture of a flaming television set. An interactive wisdom "well" portrayed the thoughts and wisdom of the person. Although highly abstract at first glance, the set of questions given to the students enabled them to immediately grasp the use of the aesthetic form and proceed quickly through the program. Many commented that they had a sense that this was a real person. One student said that the person seemed so real that she could

imagine how he would react in various situations. These are the qualities of lifelikeness, richness and realism we feel are crucial in creating case studies which support long-term engagement.

### 4. The Aesthetic Concept of Integrity Applied to Instructional Design

The concept of integrity and wholeness, i.e., a sense of fit, appears as a fundamental aesthetic construct in science and in art [18]. Winograd [20] recently remarked, "When a designer says that something 'works'...it works for people in a context of values and needs, to produce quality results and a satisfying experience." To Dewey [8], an aesthetic experience is "whole, and carries with it its own individualizing quality and self-sufficiency." A product which engenders such an experience exhibits these qualities by the way it is carefully crafted together into an integrated whole in which all the parts work together to provide the desired effect.

The notion of wholeness suggests that a totality of experience be inscribed within an instructional case study. The product serves as a means of defining the negotiation that takes place during the process of its creation. The ability to instantiate the ideas/needs of all of the collaborators in one product/process is indeed an artistic, aesthetic process. The product and process are interrelated and can't be reduced. Thus the process—the design of the designing itself—"says" something, just as the product "says" something; it expresses and states something about the people, the process, and the purpose of the enterprise.

### 5. Implications

Besides providing a foundation for creating an effective experiential case study, artistic/aesthetic approaches promise an efficient use of instructional resources. The multimedia capabilities of the computer have drawn educators into investigating the creation of virtual reality scenarios, simulated walkthroughs, multimedia databases and other extremely costly projects. The multimedia field trip project mentioned above was created by two people over a span of months and was produced by one person within a one month period. Yet the capability of the project for supporting meaningful investigation and its ability to evoke personal responses from its users indicate that we are proceeding in a fruitful direction.

Part of the reason for this efficiency lies in the fact that we do not view ourselves as the sole creators of the case study. Rather, the viewers are the co-creators. In an eloquent article in which he attempts to re-define designing Winograd states [20], "The designer and user are engaged in creating a world, not in simply bringing to the computer what existed outside of it."

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