

A Curriculum Statement : Designing Experiences, Not Objects

[Meredith Davis](#)

What are the essential features of an education in “experience design?” How does that education serve the growing need for leadership and insight in this emerging area of design practice? This paper calls into question certain educational traditions that have been taken for granted as design programs have moved to incorporate interaction design into established curricula.

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There are approximately 50 industrial design programs, 110 architecture programs and 500+ graphic design programs in four-year colleges and universities in the U.S. It has been estimated that nearly 2,000 two-year colleges also teach design in some form. Industrial and graphic design programs generally reside in schools or departments of art that exhibit certain curricular priorities and instructional biases. Students in these programs may or may not have access to course offerings in the technical or social sciences; generally speaking, there is no national history of collaboration among faculty in these programs and design professors. Electronic media-related study may occur under the course titles of computer art, computer graphics, multimedia design, Web design, information design, interaction design and animation and may be taught in programs of design, art, computer science, mass communications/journalism or technical writing.

As a result of this educational landscape, two dominant descriptions of interaction design study have emerged in many American colleges and universities: 1) resourceful students from many fields piece together relevant coursework from an array of offerings inside and outside design programs and apart from any planned curriculum; and 2) design faculty offer what they believe to be interaction design, usually in the absence of professional experience and advice from practitioners of the field. Under the latter profile, much of the student work resembles print layout or filmmaking. While there are exceptions to these two profiles, in the majority of programs, students are unlikely to acquire substantive knowledge of programming, human factors or business practices and will focus on software mastery and inventive form.

Industrial and graphic design programs are accredited by the National Association of Schools of Art and Design which reviews its members every 10 years for compliance with a group of general and disciplinary standards. The industrial and graphic design standards each occupy one 5 1/2 x 8" page in NASAD guidelines. Recently, AIGA affiliated with NASAD to rewrite standards, train qualified graphic designers to serve on accreditation review teams and publish white papers on issues of importance to design that require more extensive discussion than can be accommodated in standards manuals.

The following paper is to inform NASAD members, education in general and the design practices of the key knowledge and competencies necessary for the practice of experience design. By necessity, descriptions of competencies cannot be based on software or technology-related concerns that may change over the 10-year period of accreditation. Instead, they must focus on those aspects of design that will transcend any given invention and that are fundamental to communication problem solving. Further, language used in the description of key competencies must be understood by individuals who have no background in design. 3

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A Curriculum Statement: Designing experiences

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The historic focus of most design education has been on objects and the skills necessary to produce them; on communication and products that have physical form, from which certain relationships with audiences and users arise, and on the skill set for developing that form. Courses in college design programs are generally titled and described by the products that result from design activity (e.g. typography or photography); by the processes employed by the designer (e.g. design methods or production); and/or by the critical framework that serves as a means for analyzing and critiquing objects after they are made (e.g. semiotics, human factors or various approaches to communication theory.) “Object and designer centeredness” is a natural outgrowth of graphic and product design programs in American colleges and universities as extensions of fine arts curricula, where the artist and manifestation of his/her expressive intent and technical execution are paramount.

This strategy for teaching design has been applied more recently to instruction in interactive media. In schools where faculty and technological resources permit development of courses in computer multimedia, interface and interaction design (to use current terms referring to these areas of design practice), the focus of teaching and learning frequently is on the invention of form and mastery of technical skills. Motion and sound are acknowledged as new variables for graphic designers, but usually amplify visual concepts.

With respect to interface design problems, where dynamic user interaction with information is at the heart of the problem, many solutions and teaching strategies still maintain an object-centered approach. The designer’s primary attention is focused on building a virtual object inside the real object (the computer monitor with its own navigation devices), refocusing the designer’s attention on the physical attributes of interactive products rather than on the interactions themselves. Designer dependency on computer programmers or software, whose tendencies are toward machine-centered rather than human-centered solutions, exaggerates this problem.

While few will argue that the agendas of design and design education should disregard form and objects, what drives choices about these issues is called into question by the nature of the contemporary communication environment and emerging technological opportunity. In three meetings from 1998—2000, leading interaction designers (design professionals who develop interactive, technologically mediated communication) have met under the leadership of AIGA to discuss the changing nature of design responsibility in a networked economy. The conclusion reached by this group is that design is increasingly less about creating objects and more about creating conditions that support user experiences, and that this experiential nature of interactive communication and products will only accelerate under rapid technological development that reduces the need to be in a particular place at a particular time to accomplish a task.

This position has implications beyond simply refocusing designers’ attention on users, although that is a significant outcome. While the physical and cognitive interactions of people with information and objects at the time of use remains important, how these interactions are nested within the larger array of human experiences becomes central to design. What we know about how people converse, negotiate and collaborate in their interactions with the world in general can have implications for how designers construct specific interactive experiences for commerce, learning, work, recreation, and decision making in and among various social and political communities. And despite the demand on designers for speed of production and short-term outcomes, what individual interactive experiences mean in the lifetime of people’s relationships with clients

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for design should guide decisions about the design of those experiences.

The purpose of this paper is to raise discussion among design educators about what should comprise an education in "experience design" and how that education serves the growing need for leadership and insight in this area of design practice. It also calls into question certain educational traditions that have been taken for granted in their emphasis on objects and designers, rather than on audiences and their experiences. Lastly, this paper identifies the growing need for research related to experience design and the traditional role of universities in building and disseminating knowledge.

It is important to assert that commerce is not the only application of experience design. While designing business interactions (and more specifically, buying-selling relationships) may constitute a high percentage of today's work in interaction design, it is only one kind of experience users have with interactive communications, products, and environments. Interactive experiences increasingly characterize learning, work, recreation, community, and access to the privileges of democracy.

The following curricular objectives for the study of experience design describe learning outcomes that should result from any academic program intended to produce experience design professionals. This statement of objectives avoids specifying particular curriculum structures, course descriptions, and hardware or software expertise; these program characteristics should arise from institutional contexts and the technology available at any given time. The listed objectives attempt to transcend issues that might change quickly in favor of those that are at the core of designing conditions that support user experiences and that are likely to withstand social and technological invention over a longer period of time.

It is also an underlying assumption that the knowledge, skills, and attitudes described in this paper are most appropriate for graduate level study. However, undergraduate design programs can prepare students for later study and practice by embedding some of these concerns in studio projects and theoretical discussions and by recommending general education courses that build students' knowledge in related fields.

To provide examples of how experience design instruction may depart from the usual master's courses in graphic or industrial design, this paper includes course outlines from specific institutions. These are not to be taken as prescriptive models for other schools because they may depend on particular institutional contexts, instructor knowledge, and/or the surrounding curriculum to be effective. However, these examples offer insight into relevant issues and how the realm of experience design differs from more traditional design practices. 

A Curriculum Statement: Learning objectives

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Learning objectives for a curriculum in experience design:

1) Students will understand the difference between designing objects and designing experiences.

2) Students will analyze and synthesize the relevant aspects of meaningful human interactions in the networked economy, including:

- **the physical, cognitive/emotional, social and cultural dimensions of these interactions; and**
- **the relationship of such interactions to commerce, learning, work, community and gaining access to the privileges of democracy.**

3) Students will explore the technological mediation of experience in terms of:

- **representing/simulating/visualizing/transforming**

This objective refers to the representation of perceptions, events, and ideas in some medium other than the one in which they originated and to the abstraction of information to eliminate extraneous and distracting aspects. It also refers to designers making judgments about the appropriateness of form in facilitating the understanding and use of information by particular users/ audiences, and accounting for the contribution the medium makes to the meaning of the representation. This objective should not be regarded merely as the locus of formal invention but as describing how designers make judgments about the “goodness of fit” between form and context. It also addresses the nature of human-centered (as opposed to machine-centered) representation in a rapidly changing technological environment.

- **structuring and positioning information/managing complexity**

This objective refers to determining and accounting for structures that influence the nature and meaning of interactive experiences. It addresses designers’ understanding of the structural conventions embedded within users’ previous experiences (e.g. the expectations of information hierarchy established by learning to read in a particular language or the practice of browsing when shopping in a store), within or against which new interactions among people and with information will be designed. This objective also encourages a systems approach to design that views the design of interactive experiences as having consequences in contexts larger than their immediate applications. It acknowledges the intervention of technology in social relationships and that such intervention carries with it a values dimension about which people can make choices.

- **responding/clarifying/providing feedback**

This objective addresses shaping the social characteristics of technologically mediated experiences to meet users’ emotional, as well as cognitive and functional needs. This objective calls for students to assess patterns of social interaction (ex. human conversation, interpersonal negotiation or coaching) and to make use of these patterns when designing technological interaction.

- **validating/empowering**

This objective refers to the attitudinal and critical assessment aspects of human interactions with information and its authors/sponsors (e.g. users'/ audiences' perceptions of credibility, authority or reliability; the role of self-determined paths and choice in navigation strategies; or the structure of persuasive arguments that activate critical thinking.) This objective also addresses the cultural human factors that define how users/audiences are different in their interaction skills and attitudes. In this context, culture refers not only to nationality or ethnicity, but to groups that share common skill sets and values.

4) Students will master the “tools” used to create interactive experiences, including

- **visual, audio, temporal and kinesthetic elements and principles of design**

Students will explore the full range of human sensory reception and use them in the information environment. The use of these elements and principles should facilitate user understanding, enhance meaning and the quality of interaction among people, and mediate the relationship between people and technology.

- **language structures**

Students will employ language structures (e.g. storytelling) that enhance understanding and support users' objectives in a variety of contexts, including commerce, learning, work, recreation and social and political decision making. Students will understand the construction of verbal messages and the roles they play in defining experiences.

- **technological affordances**

Students will understand the characteristics of technology and select appropriate forms for the creation of specific experiences. They will account for the contribution technology makes to meaning and the role it plays in defining contemporary culture and communication.

Preparing undergraduates for later study

While the complement of skills and knowledge necessary for high-level experience design practice requires more study than can be accomplished in four years, relevant practices and attitudes can be fostered at the undergraduate level. The following pedagogical approaches by faculty encourage the development of such attitudes:

- 1) Centering faculty-defined student projects around users' experiences, not around designers' expressions.
- 2) Articulating the full ensemble of issues that define project contexts (cognitive, physical, social, cultural, technological and economic.)
- 3) Engaging students in some projects that demand the structuring of content across time.
- 4) Engaging students in some projects that require managing complexity, especially those for which there are many possible hierarchies among information components.
- 5) Encouraging students to diagram and model relationships among information components spatially before designing communication products.