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A Graphic Design Primer
Resources for Educators

by Sarah Beth Tregay

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Approvals

_____   *My 9 2000*
R. Roger Remington, Chief Advisor   date

_____   *5. 9. 00*
Roberley Bell, Associate Advisor   date

_____   *9 May 2000*
Bruce Ian Meader, Associate Advisor   date

_____   *5. 9. 00*
Nancy Ciolek, Chair, School of Design   date

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_____   *May 9 2000*
Sarah Beth Tregay   date

Contents

Thesis Project Definition

Design education is in a state of transition as design itself is changing. Graphic design has extended beyond the printed page in every direction. New domains are cropping up everywhere: human-computer interaction, strategic planning and new forms of media. Designers collaborate with other professionals from the sciences, the liberal arts, business and technology. Design students are being taught how to think, communicate and solve problems in many media forms.

In a four-year graphic design program, the first year of study, or foundations year, is crucial to every student. It is in this year that students come together in a new college community to explore the visual world around them. The foundations teacher plays an important role in introducing the student to the three components of graphic design problem-solving: concept development, formal aesthetic principles and practical/technical considerations. With a solid foundations year, students can achieve success in future graphic design studies and in professional practice.

This thesis recognizes the importance of the foundations year and the challenges facing graphic design education today. The goal of this thesis is to to improve the state of graphic design education today by helping educators better understand the graphic design discipline, important factors in a design education, and the needs of the student. To achieve this goal, this thesis will provide new foundations faculty and others with an introduction to the freshman year, plus resources and inspirations collected through research, interviews with educators, questionnaires answered by students and observations of classroom experiences.

Project Application

The application for this thesis is a primer—a small introductory book—on graphic design education. It can be viewed as a toolbox or 'help menu' for the new foundations faculty member. It can also be seen as the beginning of a conversation—open-ended, yet able to stimulate dialogue among educators about how and why they teach.

The audience for the Primer is educators who teach art and design at the college level, including new foundations faculty, upper-division professors and graduate teaching assistants. These educators are usually from either a fine arts or a design background.

The primer will provide an accessible collection of resources and insights from professional educators. The primer begins with a discussion about the field of graphic design and how it differs from fine art. Next, an overview of design education today is presented from its broadening base to the multitude of programs and the shortage of qualified faculty. Two different types of foundations programs are introduced. Integrated programs combine students from art and design majors whereas design-only programs consist of design and occasionally architecture students. The roles of formalism and the computer follow in subsequent chapters. The needs of design students are addressed before semiotic theory, the design brief and the Model of Human Communication are summarized. The remainder of the primer is devoted to a list of books and a list of terminology used in art and design studies.

Precedents

AIGA/NASAD Briefing Papers

The American Institute of Graphic Arts (AIGA) and the National Association of
Schools of Art and Design (NASAD) have published several briefing papers on
graphic design education. Three have been chosen as precedents for this thesis:
(1) *Technology Thresholds in Graphic Design*, (2) *Degree Programs and Graphic
Design: Purposes, Structures and Results*, and (3)*Selecting and Supporting
Graphic Design Faculty*. Together, the three briefing papers formed a precedent for
this thesis. All were thought-provoking resources for educators.

Technology Thresholds in Graphic Design addresses the technological needs of
graphic design students, including software and hardware access, design abilities
and computer skills.[1] This position paper supports this thesis' goal to address the
role of the computer in graphic design education.

Degree Programs and Graphic Design: Purposes, Structures and Results helps
prospective students, educators, administrators and evaluators understand the
purposes and outcomes of various graphic programs.[2] This paper served as a model
for writing about the wide variety of graphic design programs in the U.S. The model
was useful because it did not refer to programs as "good" or "bad," as many
educators did in casual conversation, but rather explained the degrees offered and
expected results.

Selecting and Supporting Graphic Design Faculty raised questions about the
intended audience of this thesis. The paper's understanding the complex nature of
this diverse audience served as an aid.

AIGA Career Guide

The American Institute of Graphic Arts publication *Graphic Design: a Career Guide
and Education Directory* was published for potential students. This book provides an
overview of graphic design, design disciplines, design education and a list of
colleges and universities with graphic design programs.[3] This is a small introductory
book about graphic design. It uses the wisdom of professional designers to reach
the audience. This thesis used this publication as a role-model for the application.

Implications of Technology in Graphic Design Education

The essay, "An Introduction to Hypermedia and the Implications of Technology in Graphic Design Education", by Hugh Dubberly is an entry in the 1990 GDEA Proceedings of the Annual National Symposia. Dubberly explains that education should embrace computers as a new medium, not merely as a tool.[4] This forward-thinking piece is a call to action. It lists questions to be answered by design educators and students. Example questions include "Must design education be specific to a particular medium or can it span a number of media?" and "Do computers have a place in design education as more than mere tools?"[5] This thesis will address Dubberly's questions as a portion of the application.

Becoming a Graphic Designer

Published in 1999 and written by Steven Heller and Theresa Fernandez, *Becoming a Graphic Designer* is a guide to careers in design. This excellent reference provides neophytes and practitioners with an overview of design specialties, businesses, options and design education. It is filled with personal anecdotes and experiences of professional designers. Nearly all of these entries are in interview format.

In the section on design education, the authors write "in order to go beyond rote computer applications to make really smart graphic design, a formal education is recommended."[6] They suggest a BFA degree with liberal arts studied in tandem.[7] Undergraduate, graduate and continuing education are discussed in such a manner that the design student can understand important factors of design education. Three interviews with educators follow. Questions include program purpose, preparing students for the work force, and portfolios.[8]

This book, due to its current discussion about design education, can be a precedent for this thesis. The articulate interviews and variety of opinions are intelligently organized. The authors' text is interspersed with interviews and quotes at meaningful junctures, resulting in a valuable resource for prospective students, professionals considering a career change and design educators. For these reasons, the book format can serve as a model. From a visual perspective, the book appears cluttered with samples, complex captions, shifting page numbers and a wide range of typefaces and sizes. Poor printing occasionally stalls reader comprehension of the text. Visually, this publication serves as a warning that a complex topic such as design education can be difficult to lay out.

Research

Phase 1: College and University Graphic Design Programs

The first phase included researching twelve graphic design programs in the United States and Germany. Schools with quality programs—ones that produce students who are prepared for professional practice and further design studies—were chosen. Schools were chosen in three ways. First, the school had to offer a four or five year program in graphic design, visual communications, or a closely related area. Secondly, schools listed in *Becoming a Graphic Designer* by Steven Heller and Teresa Fernandes were considered for selection. Here, the authors wrote "The following institutions offer some of the best BFA, MFA associate degree and continuing education design programs in the United States."[9] Third, Professors R. Roger Remington, Roberley Bell and Bruce Meader made suggestions based on their knowledge of programs, colleagues and research.

The schools chosen for the matrix were: California Institute of the Arts, North Carolina State University, Carnegie Mellon University, Hochschule Anhalt, Maryland Institute College of Art, Rhode Island School of Design, Rochester Institute of Technology, School of the Art Institute of Chicago, School of Visual Arts, University of the Arts and the University of Cincinnati.

In particular, the research focused on the first-year experience within these twelve programs. The research was assembled into a matrix where facts were easily accessible (see Appendix A).

Schools were identified by name, the program name and the degree granted. Two questions were asked about the graphic design program: What is the program emphasis or philosophy? and Is the design of multimedia— electronic media that combines text, graphics, video and sound—integrated into the graphic design program or is it a separate major? These questions helped identify each school.

The emphasis or philosophy of the graphic design programs varied by school. All of the programs prepared students for professional practice, but only five clearly emphasized this point in program literature such as viewbooks. Two programs, the California Institute of the Arts and the School of Visual Arts, stressed openness and choice.

The remaining seven questions on the matrix centered around topics important to the foundations year:

- Is the foundations year integrated with fine arts, design, and/or craft students taking the same courses?
- What is the point of view from which the foundations year is taught?
- What are the backgrounds of the foundations faculty?
- Is the computer integrated with the teaching of design fundamentals during the foundations year?
- Are computer skills courses taught?
- Are there studio electives for freshmen? Are there general education or liberal arts courses?
- Do teachers build a vocabulary about art and design?

A summary of the matrix in Appendix A is as follows:

- The results of this research concluded that multimedia design, or combining text, graphics, animation, video and sound, was integrated into all graphic design programs to some extent. Some programs had seamless integration while others have just begun to introduce multimedia design into the course of study.
- Integrated foundations programs were more common than design-only programs by seven to four. Only Rochester Institute of Technology had a combination of the two where the first two quarters of two-dimensional design are integrated with art, craft, photography and design students and the third quarter has an elements of graphic design course for graphic design students.
- One third of the schools either have students choose a major second semester or only admit students into a major after completion of the foundations year.
- The point-of-view of the foundations programs and backgrounds of foundations faculty was mainly art in three programs, a mix of art and design in four and mainly design in the remaining five.
- Formal approaches to curriculums were found at four schools, Hochschule Anhalt, School of the Art Institute of Chicago, University of the Arts, and University of Cincinnati. Two of these were had faculty with design backgrounds, one with a mix of art and design and one with art.
- Information about computer use in studio courses was found for half of the schools. From this information, half of the programs have freshmen using the computer to complete studio coursework: Hochschule Anhalt, Rhode Island School of Design and Rochester Institute of Technology. Here the computers are an integral part of learning. The other three schools do not use the computer in freshman studios, but rather leave it out of the design and art-making process until sophomore year.

- Computer skills courses or workshops, which focus on learning software and not design, were present at five schools. Workshops were available to students on an as-needed basis at both Carnegie Mellon University and the School of the Art Institute of Chicago. Some of these classes and workshops were taught by grad students or technicians.
- Three schools specifically did not offer classes or workshops for building computer skills.
- Studio electives were important to five programs. These electives allow for students to either explore majors, including graphic design, or gain basic computer graphics skills.
- Liberal arts studies varied from strong (33 to 40 percent of the course load) to weak. Two schools, North Carolina State University and the University of Cincinnati, included math and science courses.
- Building a vocabulary about art and design is important during the first year. Several schools stressed this point in their published literature; others spoke about vocabulary during one-on-one interviews. The importance was also obvious during all classroom observations.

Phase 2: Basic Graphic Design Books

The second phase of research reviewed basic graphic design books and compared and contrasted the contents of the books in a matrix. The matrix is reproduced in Appendix B. Six books, all noted for their quality, were chosen, including: *Graphic Design Manual* by Armin Hofmann, 1965; *Design Fundamentals for the Digital Age* by Linda Holtschue and Edward Noriega, 1997; *Design and Form* by Johannes Itten, 1964; *Basic Principles of Design* by Manfred Maier, 1980; *The New Graphic Design School* by Alan Swann, 1997; and *Basic Visual Concepts and Principles* by Charles Wallschlaeger and Cynthia Busic-Snyder, 1992. These books span time from the Bauhaus to the digital age.

This matrix covered fourteen content areas:
- problem-solving process
- drawing as a means of communicating
- analytical drawing
- visual elements of form: point, line, plane, and shape
- volume and structure
- visual and physical attributes of form: value/tone, color, texture, dimension, shape, and proportion
- space, depth and distance; form perception, perspective and depth cues
- perception of figure and form: figure/ground and gestalt theory
- composition, balance, repetition, harmony, rhythm, variety, contrast and dominance
- acquired associations
- the model of human communication and semiotic theory
- unity of form
- letterform
- media techniques

The results of this research indicated that almost every book covered the visual elements of form, volume and structure, and the visual and physical attributes of form. Composition including balance, repetition, variety and contrast appeared in all six publications. Space, depth and distance, form perception, perspective and depth cues joined drawing, color and perception of figure and form as very important content found in the majority of books. This demonstrated the importance of formal issues in basic graphic design.

Absent from all but one text, were the model of human communication and Semiotic theory. Charles Wallschlaeger and Cynthia Busic-Snyder included these in *Basic Visual Concepts and Principles.* The model of human communication illustrates the structure of visual message-making. Semiotics is the study and application of how meaning is created through signs and symbols. This indicated that, although useful aids for gaining an understanding of visual message-making, complex models and theories are uncommon in basic graphic design publications.

Phase 3: Defining Formalism

As found in Phases 1 and 2 of the research, formalism is an integral part of a graphic design education. For example four strong graphic design programs taught design with a formal approach, including Hochschule Anhalt, School of the Art Institute of Chicago, University of the Arts, and University of Cincinnati. The majority of basic graphic design books stressed learning formal aesthetic principles of design. In order to continue with the thesis work, a clear definitive definition of formalism was necessary.

Using mainly articles from library journals, an understanding of formalism was gained for the purpose of integrating the research into the thesis application. The task was to define formalism. Webster's dictionary relayed the following (ca. 1840) the practice or the doctrine of strict adherence to prescribed or external forms (as in religion or art).[10] Anthony Mann, in an essay called "The Value of Formalism in Design," described formalism as "a set of rules, methods, and practices, which together define a visual form acceptable to a group of people." He continued: "The object of visual formalism is to establish a relationship between the visual elements of society, and to provide a common basis for designers in all areas."[11] Bob Lloyd, a high school teacher from Brooklyn, found formalism to be the "grammar of design" and the "fundamentals of the applied design process."[12] Paul Rand's book *Design Form and Chaos* presented illustrations with solid formal relationships and corresponding text that related formal issues to professional practice.

From the research, the author chooses to define formalism as: a tendency, largely influenced by modernism, to observe the grammar of design which includes the structure and relationships of elements in a composition and formal aesthetic principles. These include, but are not limited to, balance, contrast, repetition, rhythm, figure/ground, and harmony. Because formal aesthetic principles are relevant to the visual world, their scope is extendible rather than finite.

After a satisfactory understanding of formalism was gained, interviews of educators were pursued. This understanding was useful when asking questions about formalism and formal issues in foundations studies.

Phase 4: Observation

In order to understand the teaching and learning process, observations of first-year design courses were arranged at three schools: Rochester Institute of Technology in Rochester, New York, Carnegie Mellon University in Pittsburgh, Pennsylvania and the Hochschule Anhalt in Dessau, Germany. Plans to visit a fourth school, the University of the Arts in Philadelphia, Pennsylvania were attempted. Unfortunately, communication with faculty at this school was restricted to messages sent by fax machine. This made contacting professors more difficult and less timely, which ultimately forced the plans to visit to be cancelled. The two US schools that were observed illustrated the two different approaches to a first-year program—integrated and design-only. For example, the RIT classes, taught by faculty from the Foundations department, were integrated with students from graphic, interior and industrial design, fine arts, crafts and photography. On the other hand, the Carnegie Mellon University classes had only communications design and industrial design students who were taught by faculty members from within the School of Design. The Hochschule Anhalt has a design-only program. In the classes that were observed, students studying graphic design, product design and multimedia design were taught by design professors.

Observation: Rochester Institute of Technology

At RIT, Professor Eileen Bushnell's two-dimensional design classes were observed for a period of seven weeks beginning in January, 2000. Bushnell received her MFA in printmaking. Bushnell's classes were chosen because there are historic precedents in which graphic design has been taught through a graphic arts context with much success. In these classes were both hearing and deaf students. An American Sign Language interpreter was present.

Color theory was a major focus of the seven weeks. Bushnell encouraged students to learn the proper terminology of color. Vocabulary lists were given to students. Building vocabulary armed students with relevant terms to voice their experiences, perceptions and opinions during critiques. In addition, formal and informal structures were explored in conjunction with color theory.

The class took place in a studio but easily moved into the computer lab when assignments required the use of vector- or raster-based imaging software, scanning or printing. All students demonstrated computer skills. They constructed forms using Adobe Illustrator. They were comfortable with adding and changing colors, as well as repeating forms to create patterns. Computer work was brought back into the studio for further exploration in texture, media, transparency and layering.

Observation: Carnegie Mellon University

Observations were made at Carnegie Mellon University over a two-day time frame in late February, 2000. A first-year drawing course and two freshman-level studio courses were observed. Photographs and audio recordings documented the experience. At Carnegie Mellon University, the three courses took place in two adjoining studios. The same fifty first-year students were in attendance at both.

Lisa Carvajal and Eric Anderson shared the responsibility for the drawing course. Both Carvajal and Anderson have backgrounds in industrial design. The students worked on diagrams which illustrated a process or sequence of events. Many illustrated how to complete a certain task, how an object functioned or the life cycle of a plant or insect. Others chose topics from fantasy or the future. The project involved writing a script about the process chosen. Composition, flow of information and hierarchy were emphasized by both teachers as they helped each individual. Final drawings were going to be made on a blueprint machine; therefore, the computer was only used occasionally.

Robert O. Swinehart's studio course involved two projects on the day of observation. In the first project, the "flip book," students moved visual elements through time and space. Here students worked with a visual language abstracted from product packages such as a Heinz Ketchup bottle or a Coca-Cola can. These simple animations were created in colored pencil. The second project, called the "hero project," began with researching a designer. Later, the designer's style would influence a magazine spread that featured him or her. Students' heroes included Lester Beall, Richard Saul Wurman, Herbert Bayer, Charles and Ray Eames, April Greiman and David Carson. For both projects, Swinehart had students bring something to the work, such as a product package or a hero in design. This helped maintain students' interest because they were involved in the decision making.

In the studio next door, Liza Wellman's class explored objects that created sounds. Students built and tested objects large and small. Some objects were wearable, such as a belt made of fragments of glass worn smooth by sand and waves; another ridable, a rhythmic bicycle with sandpaper; and another was a closet-like structure made of foam where a person could stand. Few were visually pleasing, but the sounds that they produced were unique.

Both Swinehart's and Wellman's students were required to arrive to class fifteen minutes ahead of time each day to design a postcard. The postcard was a vehicle for exploring images, shapes, collage, current assignments or design theory.

Observation: Hochschule Anhalt

At the Hochschule Anhalt in Dessau Germany, observation was more difficult due to the difference in language (classes were taught in German). Observations were made over a period of eight weeks, beginning in June 1999. Although courses with all levels of multimedia, graphic design and product design students were observed, studies during the first year apply to this thesis. Here, final presentations for second-semester design students were observed in a packaging design course taught by professor Kurt Mehnert, a product designer based in Berlin.

Kurt Mehnert's students found new ways to package everyday items. Their solutions aimed to be both functional and environmentally friendly. The final solutions were built from heavy paper and ranged from toothbrushes to paper clips and shoe polish. Each student presented a poster, generated in QuarkXPress, about their work in addition to the package. All of the posters were designed to the same specifications so the classroom was neat and orderly. Each project was cross-examined during the critique and students answered questions from their professor and peers. At this time they spoke about the "who," or the audience, the "what," or the product, and the "why," or the concept behind the design. Answering questions about design was a key part of Mehnert's teaching and the students' problem-solving process.

After observing classes at three schools, the author understood more about using the computer within the major, issues of community and isolation, and how students can learn about issues central to design within a first-year program. The computer can either be taught to freshmen as part of a studio course or it can be left for sophomore-level coursework. All of the schools built community among freshmen students. Because the freshmen class at Carnegie Mellon University was small, additional efforts to reduce the amount of isolation were made by faculty. The Hochschule Anhalt, also with a small number of students in the first year, did not have problems with isolation due to a sense of community that spanned the entire design school. The integrated nature of a student's first two quarters at RIT offered students a diverse community of peers. From color theory to sound and motion to asking and answering questions about design, each course demonstrated how students learn about design within the first-year.

Phase 5: Interviews

In order to gather current information about graphic design education, interviews were conducted. Interviews were conducted in three ways: in person, over the telephone and via e-mail. When possible, an audio recording was made; otherwise, notes were taken during the course of the interview. Transcriptions of the interviews and notes from some of the interview sessions are in Appendix C. Several interview questions were asked:

- What do you think about the state of graphic design education today?
- What is the role of the computer? Is the computer more than a tool?
- What role does formalism – a set of rules, methods and practices, which together define a visual form acceptable to a group of people – play in design education?
- What is the role of the foundation program in a graphic design education?
- Do you have any books that you would recommend to either students or new faculty?

Educators from several schools were interviewed in order to get a range of opinions. Professor Rob Roy Kelly, now teaching at Arizona State University, shared glimpses from his forty-five years of experience that included teaching at Carnegie Mellon University and Kansas City Art Institute. Kelly studied at Yale with Josef Albers and individuals who came from the Basel school.

Five professors from Carnegie Mellon University participated: Daniel Boyarski, Lisa Carvajal, Bruce Hanington, Mark Mentzer and Robert O. Swinehart. Boyarski teaches courses in typography, information design and human-computer interaction design. He has completed post-graduate work at Allgemeine Gewerbeschule Basel, Switzerland. Carvajal teaches design drawing. She is a freelance industrial designer. Hanington teaches industrial design, human factors, and research methods for design. Mentzer teaches foundation design with a specialization in design drawing and design in public places. He is also the Associate Head of the School of Design. Swinehart teaches communication design, information design, and related specializations such as packaging. Swinehart teaches students at all levels.

Both Professors John Malinoski and Dennis Rexroad from Virginia Commonwealth University were interviewed. Malinoski is the Associate Chair of the Communication Arts and Design Program. Rexroad is the Director of the Art Foundations Program.

Professors Roberley Bell, Nancy Ciolek and Marianne O'Glaughlin answered questions, while many other Rochester Institute of Technology professors shared their insights. Bell is an associate professor in the foundations department, teaching three-dimensional design. In addition, she teaches graduate courses in installation art and public space/public art. Ciolek is the School of Design Chairperson. O'Glaughlin is an Assistant Professor in Interactive Media Design & Imaging who teaches graphic design and illustration.

Professor Candice Wolff Sanders shared unique aspects about the cluster of digital design courses at the University of Rochester. Sanders has thirty years of teaching experience. She has developed and taught every digital design course in the cluster.

Phase 6: Gathering resources

One of the goals of the thesis application is to provide new foundations faculty with resources such as books, journals and definitions of terms. To add interest to the application, photographic resources were also collected. In addition, student work added visual interest to the application.

The list of reading materials was compiled from several sources. First, the reading lists of Professors R. Roger Remington, Bruce Ian Meader, and Daniel Boyarski were taken in for consideration. Then came the books recommended during interviews with educators. Third, were the ten favorite books of famous designers collected from the *Print* web site. Also involved were the reading list for the Graduate Graphic Design Program at RIT, bibliographies from graphic design studies at Yale University of Art and recently published books of note. The list of journals was taken from RIT professors' reading lists.

A glossary of terms that relate to graphic design, formalism and technology can be a good resource for new faculty. The first step in this phase was to gather important terminology. Vocabulary lists came from two sources: educators and basic graphic design books. Definitions were found in a variety of books from *Webster's Dictionary, Basic Visual Concepts and Principles, Design Language* and *Design Fundamentals for the Digital Age,* as well as course material prepared by RIT Professor, Eileen Bushnell.

Digital photographs were taken at Carnegie Mellon University and at RIT during freshmen studio courses as well as on campus.

Student work came from slides taken of Bruce Ian Meader's students' work, a publication provided by R. Roger Remington, a promotional poster for the Hochschule Anhalt and Sarah Tregay's freshman year portfolio with pieces from Pamela Blum and Kener Bond's foundations courses at RIT in 1991 and Alan Singer's elements of graphic design course in 1992. The goals of the student work were to show a sense of form, content and structure.

Phase 7: Questionnaires

In order to poll RIT students and their teachers, short questionnaires were made available to interested parties for the duration of the thesis exhibition from April 2 to April 14, 2000. Two student and one faculty questionnaire were returned. Secondly, student questionnaires were e-mailed to student members of the American Center for Design, RIT Chapter the week of April 17, 2000. Thirteen e-mail responses were collected and the names were removed. The purpose of these questionnaires was to gather more information for possible additions to the thesis application. (See Appendix D).

The student questionnaire asked the following questions:
- What school are you currently attending?
- What year/level are you in your studies?
- What is your major?
- What school did you attend freshman year?
- What is the most important thing that you learned freshman year?
- What do you think should be taught freshman year?

Out of the fifteen questionnaires, six students attended Rochester Institute of Technology for their freshman year. The remaining students were from a variety of schools, including Loyola University in New Orleans, Mercyhurst College, Monroe Community College, New England College, Northwestern College, Pensacola Christian College, University of Toledo, Wentworth Institute of Technology, and Westchester Community College.

The results of the student questionnaires are as follows. Design basics including two- and three-dimensional design, drawing and color theory were thought to be important by eleven individuals. Five students felt that an introduction to graphic design and/or the other majors is important for informed decision-making about their major. Two students said that, "I didn't really know what graphic design was"[13] and "I had no idea what Graphic Design really was until sophomore year."[14] One pointed out that design history could be introduced at this level. Three students felt either that computers should be introduced as tools for design during the freshman year or that learning to use the computer was an important part of their own freshman experience. One stated that computer classes at the freshman level is not such a good idea. Another felt that computers should be introduced sophomore year. Thinking creatively or creative problem-solving was emphasized by two students. Time management, interpersonal communication and personal growth experiences were also mentioned as important factors.

From this small sample of individuals, it can be understood that foundations programs made of core courses that teach basic design principles are recognized and appreciated by students as "the most important thing that [they] learned freshman year."

Students feel that they would also benefit from exposure to the profession through studies in graphic design orientation. Professor Rob Roy Kelly wrote in his paper "Design History/Orientation", that a class in "Graphic design orientation should be viewed as a integral part of the studio program."[15] This course could deal with design history and critical analysis of design work. Slides showing "practical work done by professional designers, photographers, painters and architects"[16] would enrich the studio experience, motivate students and facilitate understanding of studio projects.[17]

Rochester Institute of Technology has added a lecture course called Design Survey. Unlike Kelly's proposal, this course is separate from studio courses in two- and three-dimensional design. In this class, students receive an overview of the design fields through guest speakers' presentations. The speakers bring to the class projects and problem-solving experiences from various design specialties. Students are engaged in asking critical questions, writing, vocabulary building and finding examples of design. After completing this course, students should have an understanding of graphic design, new media, industrial and interior design. This will help students with the transition into their major of choice, or perhaps find a major that better suits them.

Synthesis

Phase 1: Focus

This thesis began as a different project with different goals. Originally the project was entitled: *Integrating the Computer into the Foundations for a Graphic Design Education.* Later it became: *A Balanced Approach to Graphic Design Education: Integrating the Computer into the Foundations Year.* On February 17, 2000 the thesis was described as follows:

> This thesis is an investigation of the possibilities for integrating the computer into the first year of a four-year graphic design curriculum, resulting in a proposal for an integrated plan of study for freshmen students. The computer can be integrated into Foundation studies during the students' first year at college where they are introduced to three components of graphic design problem-solving: concept development, formal aesthetic principles, and practical/technical considerations. While students are learning to communicate concepts and construct compositions, the computer can be taught as a means for executing ideas (a tool) and as a medium for communicating ideas (an interactive environment). Communicating to students about the computer is essential to achieving a balance of technology, aesthetics and message-making. With a solid understanding of the principles of design, perception and communication and computer skills, students can achieve success in further graphic design studies and in professional practice.

As research deepened and interviews began, a better understanding of foundations studies was formed. Every program approached the year differently. Whether students used the computer or learned about time and motion was not as critical an issue as formalism, liberal studies and message-making. Through research and interviews this thesis found that the broadening field of design demands a broad, yet structured design education. A shift in focus moved this thesis away from the computer towards understanding design education today. The application developed as a medium for sharing resources with educators in hopes of inspiring them.

Phase 2: Application Synthesis

After this change, synthesis occurred in several areas. One area was in identifying the approach of the application, which came as a result of a conversation among the thesis committee members. In the beginning, the application was to be a guidebook, acting as a toolbox for teachers. Applying the concept of a primer to the application brought a new, open-ended point-of-view to the piece. If the application took the form of a primer, all notions that it could be all-encompassing were no longer implied. (The guidebook or toolbox approach seemed to imply an all-encompassing, all-knowing point-of-view which was deemed inappropriate.) This was important to convey to the audience because this thesis could neither be all-encompassing nor a decisive dictum on the subject. The thesis could reach its audience better by taking the "beginning of a conversation" approach, rather than the all-encompassing, "end of conversation" approach.

Phase 3: Research Synthesis

Synthesis of the research formed the contents of the application. Reviewing the notes and transcriptions from the interviews and classroom observations showed clear overriding concepts. The fact that design education is in a state of transition was noted by Professors Swinehart, Mentzer, Sanders, and Boyarski.[17-20] Professors Kelly, Swinehart, Remington, Malinoski, and Rexroad agreed that formalism is an integral part of introductory study.[21-25] For this thesis, the idea that form and content can be learned at the same time originated during interviews with educators at Carnegie Mellon University. Professors Mehnert, Bell and Boyarski stated that students need to learn to ask questions "who, what, when, where and how?" when working on a project.[26-28] That design education can be broadened with liberal arts studies was addressed by Siprut, Bell, Mentzer and others.[29-31] Both Kelly and Bell felt that faculty should reinforce learning, especially between year levels.[32-33]

Correlations were made between the information gathered through interviews and information gathered from the basic graphic design books.

The first connection was relating the questions "who, what, when, where and how?" to Semiotic theory—the study and application of signs. The questions were introduced during interviews and conversations in the United States and Germany. The Semiotic model was found in several texts including *Basic Visual Concepts and Principles* and *Symbol Signs* as well as the Rochester Institute of Technology, *School of Design Handbook*. The author first used the Semiotic Model to assist in the understanding of the definition of graphic design. Because the model includes the overlapping relationships of meaning, formal aesthetics and functional concerns, the questions "who, what, when, where and how?" could be added to the model. "What message?", "why?", "for whom?" and "what context?" were added to the meaning/semantic area of the model. The question "what form?" was added to the formal aesthetic/syntactic area, while "how?" and "when" corresponded to the functional/pragmatic section. Later, the Semiotic Model was used in the chapter of the Primer that addressed students' needs.

The next stage of research synthesis dealt with formal aesthetic principles. Research from basic graphic design texts and interviews with educators indicated their importance. Ideas about relating formal aesthetic principles (what form?) with concepts (what message?) were generated by Boyarski and other faculty teaching at Carnegie Mellon University. Boyarski suggested that projects that focused on form and composition could be followed by assignments that contain content, such as letterforms.[34] In summary, the notion of form plus content can be introduced to students. This thesis investigated this idea as a means of bridging the gap that sometimes exists between the foundation year and sophomore level graphic design courses. This gap was illustrated in a student's own words on a questionnaire: "I didn't really know what graphic design was until I tried it, after double majoring (illustration/graphic design)."[35]

Another theory that could aid students' understanding of graphic design and visual message making is the Model of Human Communication. The author was introduced to this model by Katherine McCoy at a design conference.[36] Here McCoy related Shannon and Weaver's model and David K. Berlo's adaptation, found in *Basic Visual Concepts and Principles*, to current design practice.[37] Included in the Primer is an adapted version that aims to illustrate the structure of a visual message from source to receiver.

The most important factor from the college and university graphic design programs matrix (the integrated vs. design-only programs) was used as a basis for part of the contents of the application. Integrated programs with students from art and design majors are almost always organized by a foundations department. Design-only programs are "in-house" first-year courses most often taught from within a school of design. In a subsection entitled "Foundations Programs," pros and cons of both integrated and design-only programs were briefly introduced. Information gathered through interviews and classroom observations was synthesized to form the basis of this subsection.

After the research was completed, the author concluded that integrated foundations programs allow students to learn formal, conceptual and craft/technical skills in an environment where diversity of ideas, methods and media are valued. Collaboration and community help students grow as individuals as well as artists and designers. For these reasons, the author favors integrated foundations programs over design-only programs. Yet, the author believes that exposure to the major(s) or design orientation can enrich the studio experience. Therefore, the author proposes that, as part of an integrated foundations program, students can learn about issues central to design such as Semiotic theory, form plus content and the structure of a visual message. These studies may help students bridge the gap as they move into their major sophomore year. These studies may also assist in helping an undecided student choose a major. Another factor that is key to a successful design education is reinforcing learning from one year to the next. Because there is a forty-percent loss of retention over the summer months, information presented freshman year must be reinforced sophomore year. When upper-level design faculty understand the integrated foundations program, learning can be easily reinforced.

Phase 4: Synthesis of the Application Contents

The table of contents also grew in depth from the first draft to the final version. The first draft was as follows:

> Definition of graphic design
> Discussion of how art and design differ
> The role of formalism
> Students' educational needs
> Curricular content
> The role of the computer
> Quotes/Interviews
> Bibliography
> Glossary

The table of contents as of the thesis exhibition date read as follows:

Acknowledgements
Introduction
Defining graphic design
> Semiotic model
> Art vs. design
Design education today
> Foundations programs
The role of formalism
The role of the computer
The needs of the design student
> Who? What? Why?
> Semiotic theory
> The design brief
> The structure of a visual message
Good reading
Terminology
End notes

The final table of contents had only one change. "Art vs. Design was softened to read "Art and Design."

Acknowledgements
Introduction

Defining graphic design
> Semiotic model
> Art and design

Design education today
> Foundations programs

The role of formalism

The role of the computer

The needs of the design student
> Who? What? Why? How?
> Semiotic theory
> The design brief
> The structure of a visual message

Good reading

Terminology

End notes

Ideation

Symbol

One of the challenges of the thesis project was to take the verbal, research-oriented subject matter into a visual format. One method for bringing visual elements into the project was by developing a symbol or icon for the project. This symbol was to take a virtual format. A virtual symbol represents a product, company or idea without being presented in the same manner each time. A virtual symbol can evolve and change because it is not constrained by the designer.

Four concepts for symbol development were pursued: the elements of design, point, line and plane, an object such as a square or an apple rendered in different manners, a cube or ellipse viewed from different perspectives, and an arrow showing forward movement. Sketches of the four concepts appear in Appendix E.

Of the four, the arrow shape proved most valuable. When intersected with lines, circles and rectangles, the shape appeared lively and unique. Six variations of the symbol were created. Then, the same six were simplified to form new marks. The six variations were also altered to appear three-dimensional. (See appendix F).

Two final symbols were chosen from the eighteen possible variations. One additional mark was designed in response to the first two. In the final application, three marks are carried throughout, (see Appendix G).

Grid

The typographic grid provides the Primer with a structure which allows elements to come together as a whole. After viewing several books about design, including *Graphic Design: A Career Guide and Education Directory* by the American Institute of Graphic Arts and *Graphic Design Sources* by Kenneth Hiebert, thumbnail sketches were drawn, (see Appendix H).

A full-size typographic grid was constructed in QuarkXPress. It had six units across and nine units down, each with a gutter. The six units across allowed for the content of the book—quotes and body copy—to be organized efficiently, differentiated systematically and understood readily. The grid fit on a nearly-square format. After some review the square format was eliminated in favor of a more traditional, and more elegant, tall format measuring 7.5 by 11 inches. (See Appendix I).

When the text was applied to the grid, the main body copy spread over three units in a light sans serif face, Univers 45. Quotes taken from articles, books and interviews were offset in a heavy, but smaller, font, Univers 65, and spanned only two units. The goals of the grid are to maximize legibility and reader comprehension.

Cover design

The design of the cover also began with a review of book designs. The most attractive covers were noted as having unique combinations of elements, large point sizes for titles and smaller ones for the author's name. Thumbnail sketches were pursued with these criteria in mind. (See Appendix J). Three preliminary layouts were implemented in QuarkXPress and a favorite one was chosen. (See Appendix K).

Evaluation

Peer review

A presentation of the original thesis topic, *A Balanced Approach to Graphic Design Education*, was presented to graduate graphic design students in mid-February. The two matrices were displayed along with the books featured in the second matrix. Plans for visiting Carnegie Mellon University and The University of the Arts were discussed as well as plans for telephone interviews. The application was mentioned and a preliminary table of contents presented. A question and answer session followed. Although they expressed interest in the topic, the audience had nothing major to add at that time.

Committee review

Thesis committee members have been an excellent source for ongoing evaluations. Below are key examples of how each member has evaluated the work in progress.

Professor R. Roger Remington provided suggestions for revising the subtitle of the Primer to be more concise and more accurate. First, the subtitle was clearly too complex: *Resources and Inspirations for Foundations Faculty.* Next, it was shortened to: *Resources and Inspirations for Teachers*, but then changed back to: *Resources for Foundations Faculty.* After some discussion, Remington felt that *Resources for Educators* was ideal. Later, a new subtitle was proposed: *Critical Issues in Education.* Although this subtitle held promise, the other thesis advisors could not be contacted in time to make the change and output the thesis before the sign-off date. In addition to evaluating language, Remington has helped shape the application contents and layout.

Professor Bruce Ian Meader evaluated the typography on a rough draft of the Primer. The outcomes of this early critique were a more organized system, a unique look for the page numbers, cleaner type and a clear relationship between headings and text. The subsequent drafts of the application reached expectations. Meader also carefully reviewed the contents of the Primer. His comments on grammar, writing, photographs, examples, and typography were useful in advancing the application to a final version.

Because of her experience in foundations studies, Professor Roberley Bell was able to evaluate the content of the Primer. An early draft of the primer was biased towards Carnegie Mellon University and could not achieve its goals. Bell suggested at this time to conduct more interviews, include more information about RIT, and to listen to the audio recordings of a conference entitled "Design Education in the Twenty-first Century." The outcomes of this further information-gathering have led to more successful revisions of the application. Later in the process, Bell noticed a lack of the author's point-of-view in the primer text. This too has led to positive changes in the application.

Review by RIT Faculty

When the application reached a satisfactory stage of completion, one copy was placed in the thesis exhibition. Three copies were distributed to thesis committee members for further comments. Four copies were distributed to foundations faculty at RIT. Five were given to graphic design faculty, also at RIT. One was given to a new adjunct faculty member at RIT. Each faculty member was asked to complete a three-page evaluation form after viewing the book. Approximately two weeks were allotted for evaluation with a reminder distributed in faculty mailboxes after one week. The evaluation asked the following questions:

A Graphic Design Primer Evaluation Form

Background information

1   What level(s) do you teach?
    ◯ freshmen   ◯ sophomores   ◯ juniors   ◯ seniors   ◯ continuing education
2   What courses do you teach?
3   What is your educational background?
4   Outside of teaching, what type of artwork or design do you pursue?

Content

5   In reviewing the book, did you agree or disagree with the information presented in the following sections? Why?

    Defining graphic design (pages 1 & 2)
    ◯ Agree   ◯ Disagree
    Why?
    What would you add to this section (if anything)?
    What would you remove (if anything)?

    Art vs, design (page 3)
    ◯ Agree   ◯ Disagree
    Why?   .
    What would you add to this section (if anything)?
    What would you remove (if anything)?

    Design education today (pages 5 - 9)
    ◯ Agree   ◯ Disagree
    Why?
    What would you add to this section (if anything)?
    What would you remove (if anything)?

    Foundations programs (pages 10 & 11)
    ◯ Agree   ◯ Disagree
    Why?
    What would you add to this section (if anything)?
    What would you remove (if anything)?

    The role of formalism (pages 13 - 15)
    ◯ Agree   ◯ Disagree
    Why?
    What would you add to this section (if anything)?
    What would you remove (if anything)?

    The role of the computer (pages 17 - 21)

○ Agree ○ Disagree

Why?

What would you add to this section (if anything)?

What would you remove (if anything)?

The needs of the design student (pages 23 - 27)

○ Agree ○ Disagree

Why?

What would you add to this section (if anything)?

What would you remove (if anything)?

6 Which part of the book was most interesting to you?

○ none

7 Did examples from colleges and universities contribute to the understanding of the topics?

○ yes ○ no

8 Do you feel that there were too many, enough or too few points-of-view from different educators and institutions included in the book?

○ too many ○ enough ○ too few

9 Did you learn something new about foundations graphic design education?

○ yes ○ no

If yes, what did you learn?

10 Do you think that this book would be useful for new foundations faculty?

○ yes ○ no

If yes, why?

11 If copies of this book were made available to you, would you recommend them to your peers?

○ yes ○ no

Eight out of thirteen evaluations were returned within two weeks. All four evaluations from foundations faculty were returned. One form from the new adjunct faculty was also returned. Comments from the three committee members were submitted. The five that were not returned belonged to design faculty. Two design faculty chose to speak with the author in person instead of filling out the evaluation form. Both faculty were generally accepting of the thesis application. One, who had received an MFA in painting and an MFA in graphic design, made constructive criticism for the section on "Art vs. Design."

It should be noted that the evaluation forms were distributed to design faculty via their mailboxes at RIT, whereas the forms that were returned were distributed in person to foundations faculty, the adjunct faculty member and the thesis committee. The method of distribution may have affected the return rate. If the method of distribution had been the same, the following conclusion may have been drawn: the foundations faculty, adjunct and committee members have more interest in the topic than the design faculty. Since the method of distribution varied, this conclusion cannot be made. (See Appendix K to view the evaluation forms).

Summary of responses

The responses to the Primer did not surprise the author or the thesis committee. It was to be expected that professors with a grounding in the arts would not agree with the Primer's proposal that students learn about issues that are central to design. On the other hand, ideas set forth in the Primer were well received by those with a graphic design background. The skepticism of the faculty members in the arts contrasts the with the level of acceptance expressed by designers.

Defining graphic design (pages 1 & 2)

One response read "Various definitions provided were helpful in confirming or inspiring a personal definition."[38] Another "this section seemed to define design as I understand it."[39] Others suggested expanding the definition to include three-dimensional endeavors and the personal voice of the designer that is expressed while meeting the client's needs.[40] More clarity of the larger field of graphic design was needed.

Art vs. Design (page 3)

Overall, more people disagreed with this section than agreed. The responses to this section emphasized the relationships between the fine artist and his or her patrons. "The differentiation of fine arts from graphic design as being centered on client-initiated content seems naive. All art work, if it functions successfully within the context of the larger art world, will be client centered, be it by patrons, gallery directors, museum curators or critics."[41] One professor, who comes from a background in crafts and has an interest in illustration, felt that "the artist dealing with only the 'internal' was the crux of the problem" because "without consideration for communication of dialogue with the viewer, or an interest in using an understandable vocabulary, Art has been left to insult and degrade rather than communicate, or heaven forbid, to pursue beauty or intrigue."[42] One response suggested that good art and design "communicate on multiple levels."[43] An omission was pointed out that graphic design also occurs within social, economic, political and cultural contexts.[44]

Design Education Today (pages 5-9)

One individual felt that this section had many conflicting viewpoints and lacked an overview.[45] More in-depth discussion was called for, including a response to desktop publishing.[46] Several faculty members favored the broader educational options to a point, but were concerned with students' skill levels; "I am in favor of a broader liberal [arts] base of courses, but not at the expense of skills."[47] One faculty member felt strongly about educating students instead of training them "We do not presently educate at RIT, we train (Swanson quote). Education would endanger enrollment, retention and the bottom line."[48]

Foundations Programs (pages 10 & 11)

Advocates for a broad-based, integrated foundations program were in the majority. They supported their position with statistics. For example: the average undergraduate changes majors three times and people will change careers four or five times in their life.[49] Due to these statistics, one professor advocated for a course that was the "better opportunity to explore the design major in the first year."[50] One response read

"Yes, Foundations has for too long looked at its mission as one of preparing students for anything, vs. our major programs."[51]

Reinforced learning was brought up by this individual: "there is a forty percent loss of retention over the summer at all educational levels."[52] He or she also notes that "the understanding and knowledge of the broad based and interactive curriculum covered in the first year is lacking on the part of those teaching the Sophomore curriculum." Another felt that "the real discussion of this topic needs to be in *A Foundations Primer: Resources for Upper Division Faculty.*" One faculty member found this section "the most biased. I feel that assumptions were made about changes in programming without the necessary documentation of outcomes…" Another felt that this area "needs work and testing."

The Role of Formalism (pages 13-15)
This section lead to the question "How does transition and innovation occur relative to the use of formalism within a graphic design education?"[57] Three faculty members agreed with this area, noting that "content is key," "great section" and "critically important info here."[58-60]

The Role of the Computer (pages 13-15)
All but one educator indicated that they agreed with the section. "Adding specific examples of how design has transformed the computer" was suggested.[61] One noted that this was "well written."[62]

The Needs of the Design Student (pages 17-21)
"There isn't a yes/no to this one," one educator writes. "Without an engaging and convincing vision on the problem and future of the program fields, a plan that all of the levels of the teaching [staff] buys into, and one that they are then knowledgeable of, the needs of the students will be addressed helter-skelter and idiosyncratically by the various instructors."[63] Those who agreed with the Primer pointed out that it is "always good to consider user" and "great examples and explanation showing the importance of asking questions."[64-65] Here one educator would add "design solutions apply to all visual artists."[66]

Which Part of the Book Was Most Interesting?
Two pointed out formalism as interesting while others said that the role of the computer, the needs of the design student, and the range of opinions interested them. One found "the layout and the obvious amount of time and research spent on the thesis" to be of interest.[67]

Examples
Most found that the examples from colleges and universities contributed to the understanding of the topics. More examples and more interpretation would help. The many points-of-view presented in the book were confusing to two educators because there was a lack of personal identity or direction. The remaining found there to be enough opinions included and that they were "fascinating."[68]

Usefulness

When asked if the book would be useful for new foundations faculty, two replied that it would depend on the nature of the foundations program. The same individual would not recommend the book to peers because he or she "is committed to a broad based and diversified foundation curriculum..." and is "not aligned philosophically with your recommendations."[69] On the other hand, two would recommend the book to peers, one of whom because "It helps put the role of the educator into perspective within the colleges."[70]

Informal Evaluations

Several individuals have expressed interest in the Primer due to its content and design. For example, new adjunct faculty at Rochester Institute of Technology asked for a copy of the book after viewing the thesis exhibition. At a portfolio review in Buffalo, New York, George Campos, the owner of several photography studios, left his name and address with the author so that a copy of the primer may be mailed to him. Professor Bob Mejer of Quincy College in Quincy, Illinois, requested a copy of the Primer after an e-mail discussion with a member of the author's family. Quincy College is considering starting a graphic design program. Educators who were interviewed for this thesis also expressed interest in obtaining the Primer.

Implementation

Comments from the evaluation forms were used to refine and develop the Primer.

First, the introduction was changed from a publication for new foundations faculty to include a broader audience: "It can be viewed as a toolbox or 'help menu' for new foundations faculty, upper-division professors and graduate teaching assistants." This was done in response to comments and discussions with Roberley Bell about upper-division faculty. The introduction continues with "This Primer may assist upper-division faculty members with grasping the concepts taught freshman year so that they can reinforce learning." (See Primer in Appendix M, page iii)

Secondly, additions were made to "Defining Graphic Design." The original copy left little room for three-dimensional applications. Revisions sought to be more inclusive. "The result of the activity is a design: a visual composition, an intellectual property, an object or environment, a model or a sketch.' Design is commonly divided into special-ties including, but not limited to, interior design, industrial design and graphic design." For example "The fields of exhibit design and environmental graphic design address three-dimensional spaces and experiences." (See Primer in Appendix M, page 1)

In the portion of the primer called "Art vs. Design", changes were made in order to clarify the topic. The first item that was changed was the title. The new title reads "Art and Design." The new title responds to a new first paragraph that highlights sim-ilarities between fine art and design. The omission of the impact of social, economic and political surroundings on graphic design was remedied. The issue of the artist's clients was better addressed by including the following, "The artist initiates the concept and content of his or her own work in relation to the larger art world, patrons, curators and critics." Possibilities for the artist to create a dialogue with the viewer were added. "The artist addresses these concerns in order to communicate with the viewer." (See Primer in Appendix M, page 3)

Because there seemed to be some confusion among evaluators about "client-initiated content" (as opposed to "client centered"), the paragraph on the role of a graphic designer was changed to repeat the concept "client-initiated content" in different words. The words "client's information" were added. "The designer is the mediator who conveys the client's content—words and information—in a manner that suits the project and [his] own visual sensibilities." Here the visual sensibilities of the designer are also addressed. A quote from Michael Bierut also explains the idea of "client-initiated content" as follows: "Designers have to work with somebody else's content, words that someone else has come up with and a message they have come up with. This is what design is. And this is what makes it different from fine art."[71] This quote replaces the quote from the Pratt Institute Undergraduate Bulletin that reflected twentieth-century art theory. (See Primer in Appendix M, page 3)

Fourth, small additions were made in the "Design Education Today" section. On page 5, "any medium" was better explained by the following examples: "ranging from museum exhibits, to books, to the internet." On page 7, the term "desktop publishing" was inserted as part of the discussion on training vs. education.

Fifth, the introduction to foundations programs was expanded upon to clarify and inform. From the evaluations, information that strengthened this area was gathered. On page 10, statistics were added in support for an integrated foundations program. New copy reads as follows:

> Integrated foundations programs allow for an exploration of art and design skills. This is important because the average undergraduate changes majors three times and most adults change careers four to five times in their life. (See Primer, page 10)

Here, the revised text reflects issues raised in evaluations:

> Secondly, design faculty may feel as if they have to repeat formal aesthetic principles during first semester of sophomore year because students have gaps in their understanding or have a "visually-busy" or cluttered way of working. With a forty percent loss of retention over the summer months, this notion rings true. This feeling may also stem from foundations faculty's not understanding what each of the disciplines wants students to learn due to a lack of communication on the part of upper-division faculty. (See Primer, page 10)

Professor Bruce Meader's comments on the nature of design-only programs being "in-house" were addressed. "These first-year programs are often "in-house" ventures, organized from within the design school. Some take place in institutions that do not have majors in the fine arts or the crafts." (See Primer, page 11). Also on page 11, under the discussion of recent curricular changes at RIT, clarification was added."It is much to soon to know if this change will impact student retention, graduation or professional practice," because one evaluator found the copy on this page to be "premature to suggest that it will enhance the success of the program." The original copy read as follows:

> In the 1999-2000 school year, RIT's School of Design implemented a new curriculum. For the first two quarters, graphic design students enroll in 2-D and 3-D studio courses with art, photography, craft and interior and industrial design students. In the third quarter, they take a course in the elements of graphic design, a course originally taught to sophomores. The combination moves graphic design forward into the first year.

An additional spread, pages 12 and 13, was added to the subsection on "Foundations Programs." Here the author's conclusions were presented as follows:

> ...integrated foundations programs allow students to learn formal, conceptual and craft/technical skills in an environment where diversity of ideas, methods and media are valued. Collaboration and community help students grow as individuals as well as artists and designers. For these reasons, the author favors integrated foundations programs over design-only programs. Yet, the author believes that exposure to the major(s) can enrich the studio experience. (See Primer in Appendix M, page 12.)

Examples drawn from student questionnaires were included in support of the author's conclusions. The importance of reinforced learning was repeated. (See Primer in Appendix M, page 13.)

In the chapter on the role of formalism, the author's definition was added in hopes that it would alleviate some concerns of one evaluator about transition and innovation relative to the use of formalism.

> ...a tendency, largely influenced by modernism, to observe the grammar of design which includes the structure and relationships of elements in a composition and formal aesthetic principles. These include, but are not limited to, balance, contrast, repetition, rhythm, figure/ ground, and harmony. Because formal aesthetic principles are relevant to the visual world, their scope is extendible rather than finite. (See Primer in Appendix M, page 17)

Changes to "The Role of the Computer" were minimal. A quote from one of the evaluations in Appendix K was added and the opening paragraph was made simpler. (See Primer in Appendix M, page 19).

"The Needs of the Design Student" chapter had several revisions. "Visual artists" was added to the sentence "Designers and visual artists are problem solvers." (See Primer in Appendix M, page 25). Further research on Shannon and Weaver that was provided by Professor Bruce Meader enhanced the discussion of the Model of Human Communication on page 29.

Dissemination

At the completion of this thesis, thirty to thirty-five copies of *A Graphic Design Primer* will be produced. Each committee member will receive five copies for future reference or to give to persons who show an interest in the topic. Approximately twelve copies will be given to educators who assisted with this thesis. These educators are from Arizona State University, Carnegie Mellon University, Virginia Commonwealth University, Rochester Institute of Technology, and San Diego State University. Several copies will be distributed to individuals in the graphic design and photography fields who expressed interest in the project.

The first step to mass distribution of *A Graphic Design Primer* will be obtaining an International Standard Book Number (ISBN). An ISBN is a 10-digit number that uniquely identifies published books.[72] ISBNs may obtained through the R. R. Bowker website for a fee of $205.[73] This number would be added to the appropriate pages of the book.

The final of *A Graphic Design Primer* can be digitally printed, bound and trimmed. The CIMS Print department at Rochester Institute of Technology volunteered their services for printing five copies of the application. Additional copies will be digitally printed at Kinkos.

The title would be submitted to internet bookseller Amazon.com's Advantage program for independent publishers. In order to qualify for the Advantage program, the book must satisfy Amazon.com's suitability standards. These standards currently relate to quality, value, subject matter, production standards, and compliance with intellectual property laws. If accepted, the title would be listed on Amazon.com's search engine. Copies of the printed book would be mailed to Amazon.com. Customers in the US and in more than 160 countries worldwide could purchase the book through Amazon.com. This internet bookseller would provide reliable service and security for each purchase.[74]

To increase awareness about the book and its availability on Amazon.com, sample copies could be mailed to college and university foundations and graphic design programs in addition to the copies distributed immediately following the completion of this thesis. A web site and direct mail may be used to disseminate information about *A Graphic Design Primer*, encouraging potential customers to visit Amazon.com.

Retrospective Evaluation

The final thesis application, *A Graphic Design Primer* is an introduction to critical issues in design education today and a multi-faceted collection of resources for educators. The format is attractive and comfortable to hold. The typography is eye-catching but does not interfere with reading. The photographs add interest, but the output could be sharper with a finer line screen. If the budget allows, future revisions could be printed on better equipment. Examples of student design work show quality of form. Examples of design work from more schools could be represented in a future version.

The application would benefit from extensive research in the area of exposure to issues central to graphic design during the freshman year. This research would include at least three universities' students' data on retention rate, selection and changing of majors, graduation rate and success as professionals. Additional information and/or more in-depth discussions could be added in the future.

Conclusion

Outcomes

The success of this piece depends greatly on the the reader and the nature of the foundations program. From the evaluations, it may be assumed that readers with a design background and those who are new to teaching foundations are more aligned with the ideas set forth by the Primer. Established foundations faculty with steadfast ideas about foundations programs either rejected the Primer or would not recommend it to peers. Revisions to the Primer were made in order to address some concerns set forth by these faculty members. Further evaluations could determine if these changes altered any opinions. The underlying content of the Primer will not be changed in a future version simply because it is not accepted by every educator.

Several evaluators indicated that the usefulness of the Primer depends on the nature of the foundations program. The Primer may be useful to new adjunct faculty who teach RIT's Elements of Graphic Design course, or a simular course at a different school, to freshman students. These faculty are often professional graphic designers who teach students majoring in the field. The Primer may be a useful resource in schools where administrators of design programs hire the faculty members who teach freshman-level two- and three-dimensional design courses. These faculty members tend to have a positive relationship with the design program at their school. Although it cannot be proven at this time, the Primer may also help upper-division faculty understand more about foundations programs.

Overall Experience

Any venture into new arenas is both stimulating and overwhelming. Graphic design education is no different. Although little material on foundations for a design education can be found in any one library, educators are a wealth of information on the topic. Each individual can articulate his or her approach to teaching, how his or her students learn and grow and what type of foundations program he or she believes produces successful graphic designers. Interviewing educators was a fascinating aspect of this thesis. Yet the variety of opinions, number of conflicting ideas in the field and those teaching in it were overwhelming at times.

Overall, this thesis allowed for in-depth study in design education at its most crucial point, the first year and within an atmosphere of change, at the beginning of the twenty-first century. With a better understanding of foundations, formalism and the surrounding theories, the author will be better prepared to pursue a career in graphic design education. Because the Master of Fine Arts degree is required for a career in graphic design education at the college level, this experience is both timely and suitable.

Endnotes

[1]American Institute of Graphic Arts and National Association of Schools of Art and Design, *Technology Thresholds in Graphic Design Programs*, 3.

[2]American Institute of Graphic Arts and National Association of Schools of Art & Design, *Degree Programs and Graphic Design: Purposes Structures & Results*, 1-2.

[3]American Institute of Graphic Arts, *Graphic Design A Career Guide and Education Directory* (Boston: Reynolds DeWalt Printing,1993).

[4]Hugh Dubberly, "An Introduction to Hypermedia and the Implications of Technology in Graphic Design Education." *1990 GDEA Proceedings of the Annual National Symposia.*

[5]Ibid.

[6]Seven Heller and Teresa Fernandes, *Becoming a Graphic Designer.* New York: John Wiley, 1999, 267.

[7]Ibid., 268.

[8]Ibid., 275-279.

[9]Ibid., 280.

[10]*Websters Ninth New Collegiate Dictionary.* Springfield: A Merriam-Webster, Inc., Publishers,1990, 485.

[11]Anthony Mann, "The Value of Visual Formalism in Design" Photocopied.

[12]Bob Lloyd, "Souvenirs of Formalism," *Art Education* (May 1997): 17.

[13]Student Questionnaire, Appendix D.

[14]Student Questionnaire, Appendix D.

[15]Rob Roy Kelly "Design History/Orientation" Photocopied.

[16]Ibid.

[17]Robert O. Swinehart Carnegie Mellon University, interview by author, 29 February 2000.

[18]Mark Mentzer Carnegie Mellon University, interview by author, 28 February 2000.

[19]Candice Wolff Sanders University of Rochester, interview by author March 2000.

[20]Daniel Boyarski Carnegie Mellon University, interview by author, 28 February 2000.

[21]Rob Roy Kelly Arizona State University, interview by author March 2000.

[22]Robert O. Swinehart Carnegie Mellon University, interview by author, 29 February 2000.

[23]R. Roger Remington Rochester Institute of Technology faculty, interview by author 14, March 2000.

[24]John Malinoski Virginia Commonwealth University, interview by author, 23 March 2000.

[25]Dennis Rexroad Virginia Commonwealth University, interview by author 23 March 2000.

[26]Kurt Mehnert Hochschule Anhalt, interview by author, July 1999.

[27]Roberley Bell Rochester Institute of Technology, interview by author 21, March 2000.

[28]Daniel Boyarski Carnegie Mellon University, interview by author, 28 February 2000.

[29]Mark Siprut San Diego State University, interview by author, 13 April 2000.

[30]Roberley Bell Rochester Institute of Technology, interview by author 21, March 2000.

[31]Mark Mentzer Carnegie Mellon University, interview by author, 28 February 2000.

[32]Rob Roy Kelly Arizona State University, interview by author March 2000.

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[36]Katherine McCoy, AIGA San Diego Y Design Conference, San Diego , 7 February 1998.

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[38]Evaluation Form 3, Appendix L.

[39]Evaluation Form 2, Appendix L.

[40]Evaluation Form 7, Appendix L.

[41]Evaluation Form 6, Appendix L.

[42]Evaluation Form 7, Appendix L.

[43]Evaluation Form 2, Appendix L.

[44]Evaluation Form 6, Appendix L.

[45]Evaluation Form 5, Appendix L.

[46]Evaluation Form 7, Appendix L.

[47]Evaluation Form 6, Appendix L.

[48]Evaluation Form 7, Appendix L.

[49]Evaluation Form 1, Appendix L.

[50]Evaluation Form 3, Appendix L.

[51]Evaluation Form 7, Appendix L.

[52]Evaluation Form 6, Appendix L.

[53]Ibid.

[54]Evaluation Form 7, Appendix L.

[55]Evaluation Form 6, Appendix L.

[56]Evaluation Form, Appendix L.

[57]Evaluation Form 6, Appendix L.

[58]Evaluation Form 5, Appendix L.

[59]Evaluation Form 3, Appendix L.

[60]Evaluation Form 4, Appendix L.

[61]Evaluation Form 3, Appendix L.

[62]Evaluation Form 1, Appendix L.

[63]Evaluation Form 7, Appendix L.

[64]Evaluation Form 4, Appendix L.

[65]Evaluation Form 3, Appendix L.

[66]Evaluation Form 2, Appendix L.

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[68]Evaluation Form 6, Appendix L.

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Glossary of Terms

Audience a group of people who receive a message

Balance components of equal strength creating a visual equilibrium, can be symmetrical or asymmetrical, "dynamic balance"

Collaboration a joint intellectual effort

Color an aspect of objects, elements and light sources that can be described in terms of hue, lightness and saturation

Composition a complete entity which is meant to be sensed as a whole, may be two-dimensional or three-dimensional

Computer skills ability to use software, hardware and peripherals to complete a task

Concept an idea, thought theory or notion; the messages communicated by a specific set of visual relationships in a particular situation; the structuring of a relationship among forms and messages to achieve the particular expression within the context

Content the subject matter of a document or piece of work; the meaning or underlying thought of a work, as distinguished from its form. Content is the permission for the form of the message.

Depth perception the ability to judge the distance of an object and/or the spatial relationships among objects

Design (verb) to intend, to devise for a specific function or create according to plan

Design (noun) a sketch, a plan, an arrangement of elements in a product or work, the creative process of executing aesthetic or functional designs

Design-only foundations program a first year of study where graphic design, industrial design, interior and/or architectural design students, or a combination thereof, take the same courses

Drawing a graphic process that depicts forms on a surface

First year program a series of courses created for college freshmen

Form the shape or structure of something, distinguished from its materials

Formal relating to or involving the outward form, structure, relationships or arrangement of elements rather than the contents

Formal aesthetic principles grouping, harmony, repetition, rhythm, pattern, balance, visual contrast, figure ground

Formal structure the framework or grid of a composition that may be regular/repetitive, proportional/gradational or radial in nature

Formalism a tendency, largely influenced by modernism, to observe the grammar of design which includes the structure and relationships of elements in a composition and formal aesthetic principles. These include, but not limited to, balance, contrast, repetition, rhythm, figure/ ground, and harmony

Foundations a core set of courses taught during the first year of a four year program of study in art and design; most often including two-dimensional design, three-dimensional design and drawing

Freshmen students who are in their first year of study at the college level

Fundamental primary or basic

Graphic design a term originally coined by William Addison Dwiggins to describe the activities of an individual bringing structural order and visual form to printed communications

Grid a framework of evenly or proportionally spaced horizontal and vertical lines, used to organize elements within a format, often transparent

Hypermedia a collection of keywords, graphics, images, video and sound linked by associations

Informal structure free, independent organization within a composition

Integrated foundations program a program which combines students from art and design majors; may also include crafts, photography and architecture

Interactive a mutually or reciprocally active electronic communication system that involves the user's orders or responses

ISBN International Standard Book Number, a 10-digit number that uniquely identifies published books

Legible capable of being read

Liberal arts studies at a university that are intended to provide general knowledge and develop intellectual capabilities, for example language, philosophy, history, and literature

Medium intermediate material for expression (plural media)

Model of Human Communication an outline used to describe the structure of a visual message, attributed to Shannon and Weaver, adapted by many authors including David Berlo

Multimedia integrating more than one medium; Computer systems enable the integration of electronic media, combining text, graphics, animation, spatial modeling, imaging, video and sound

Perspective drawing a three-dimensional projection that shows an object as the eye sees it from one view point

Pragmatic technical or functional aspects including ergonomics, production, specifications, and distribution

Primer a small introductory book

Professional practice earning a living as a graphic designer

Raster a pattern of pixels used to form an image

Semantic of or relating to the meaning of language

Semiotic theory the theory of signs

Script a written narrative

Space a two- or three-dimensional area defined by the visual elements such as a picture plane or environment

Strategic planning the process of developing an approach for achieving goals

Structure the basis of formal relationships, the framework or grid of a composition or design

Studio a classroom space where students have an area in which to work or a class where students learn about art, design and drawing through hands-on experiences

Symbol something that represents something else, a printed or written sign or mark

Texture a dimensional quality of a surface, for example grainy, fibrous, woven or a complex pattern

Thumbnail sketch a small, quick drawing that describes an idea or design in its simplest form

Tool an object that helps the user work, used to optimize efficiency

Variety having different forms

Vector a series of fixed points, lines and fills that create an image

Virtual existing in essence or effect, such as on a computer monitor

Visual elements of form the abstract concepts of point, line, plane and shape

Visual language the designed elements, whole or parts, of graphics, images, colors, and shapes that define unique qualities that collectively communicate a message

Volume space that is contained within a three-dimensional object, the product of points, lines and planes

	Attributes	Program Attributes		Attributes of the Foundations year	
Colleges and Universities	School Name Program Name Degree Granted	Program emphasis or philosophy	Multimedia integrated into Graphic Design program or separate?	Integrated Foundations Year? (Mixed art, design, and/or craft students)	Point of view for Foundations year (Art, design, formal?)
	California Institute of the Arts Graphic Design BFA	Stress is on openness Independent study 3rd and 4th years Practical & conceptual skills	Integrated	No, separate classes for graphic design students.	Graphic design point of view Theory, formal, methodology, drawing for design, computers
	North Carolina State Univers. Graphic Design also Art+Design BFA	Students develop perception, knowledge & problem solving skills; "Designers shape the world"	Integrated	Yes, including art, design and architecture students; select major second semester	Design point of view, composition, hand skills, impact of design on culture/environment, process
	Carnegie Mellon University Communications Design BFA	Communication & human experience; Humanistic vision of design; improving quality of life; also to prepare for professional practice	Integrated	No, separate classes for graphic & industrial design "discovery" choose major after second semester	Design point of view, broad base, intro to studio, methods, history/criticism/theory
	Hochschule Anhalt, Dessau Graphic/Multimedia/Product Diploma	Graphic design, product design and multimedia taught simultaneously	Seamless integration	Only design students	Formal
	Maryland Institute, College of Art Graphic Design BFA	Emphasis on preparation for professional practice; designers as "Creators of Culture"	Integrated	Yes	Study all aspects of visual arts, balance skill and individual voice, studies of color, drawing, sculpture
	Rhode Island School of Design Graphic Design BFA, BGD	Stress on professional practice	Integrated	Yes	Mainly art
	Rochester Institute of Technology Graphic Design also New Media BFA	Stress on professional practice	Integrated into graphic design or choose New Media major	Integrated with art, craft and photo students for two quarters, separate for one quarter	Mainly art point of view for two quarters, design point of view for one quarter
	School of the Art Institute of Chicago Visual Communications BFA	Designers to see with the eye of an artist, focus on meaning and theory	Integrated	Yes	Art point of view, formal Depends greatly on the professor because Faculty choose focus for courses
	School of Visual Arts Graphic Design also Advertising & Computer Art BFA	Stress is on choice, personal vision/style and true-to-life	Integrated with traditional areas	Yes	Broad spectrum, appears to be art-based (design starts 2nd year)
	Virginia Commonwealth University Communication Design BFA	Problem solving for professional excellence	very integrated	Yes, only admitted into the major after the first year	Balanced art and design, some art-based courses, others design-based
	University of the Arts Graphic Design also Multimedia BFA	"Exploring the new"	Integrated	Yes, enter major 2nd year No foundations for multimediaprogram, it's in a different college	Formal
	University of Cincinnati Graphic Design also Digital Design BS (5 yrs w/ 1.5 yr co-op)	Concentration on process, co-op covers other types of knowledge	Sketchy integration, Digital design seen as separate study	No. School of Design students only (graphic, digital, product, fashion & industrial design)	Formal

Basic Design Books

Content

Content	Basic Visual Concepts and Principles Wallschlaeger /Busic-Snyder	Graphic Design Manual Armin Hofmann	Design and Form Johannes Itten	The New Graphic Design School Alan Swann	Design Fundamentals for the Digital Age Holtschue/ Noriega	Basic Principles of Design Manfred Maier
Problem-solving process	●				●	
Drawing as a means of communicating	●		●	●	●	●
Analytical drawing	●				●	●
Visual elements of form: point, line, plane, shape	●	●	●		●	●
Volume and structure	●	●	●	●	●	●
Visual and physical attributes of form: value/tone, color, texture, dimension, shape, proportion	●	●	●	●	●	●
Color, color notation systems and theories, psychology of color	●		●	●	●	●
Space, depth and distance, form perception, perspective, depth cues	●	●	●		●	●
Perception of figure and form: figure/ground, gestalt theory	●	●		●	●	●
Composition, balance, repetition, harmony, rhythm, variety, contrast, dominance	●	●	●	●	●	●
Acquired associations free, familiarity, reading order, hierarchy	●					
Visual communication theory: structuring a visual message, human communication, messages and codes, Semiotics	●					
Unity of form	●	●				●
Letterforms	●	●		●	●	●
Media and technique	●		●	●	●	●

Roberley Bell interviewed by author

March 21, 2000

Rochester Institute of Technology, Rochester, New York

ST: What is the state of graphic design education today?
RB: The state of design education is in a quandary because the computer... is also kind of the rope around the neck because everyone thinks they [he or she] can be a graphic designer. It is much more important that students really be educated in the nuance of typography, to the way in which space and language is composed on the picture plane or on the screen so that it becomes "readable" material.

I think [design education] needs to be broader and much more expansive because art and design is not just about type and artifact. It is this whole picture of the world in which we live.

We do a disservice when we simply train people. ...fall into the trap with our own program. We have to be very careful that we don't enter into this world of simply training people.

It is not education. It is not learning. Training is not about asking questions: why? What are the things I need to know? Training is not education. Informed decisions come from broad spectrum information, beyond formal language, cultural interpretations, the climate in which we live, political, and social issues.

Everybody is circling around the idea of the narrative. But you can't write a good narrative; you don't have a story to tell. And you can't have a story to tell if you don't have a broad vision.

I hate to see the idea of design being segregated out from any other part of our visual culture. They have become so married.

Dealing with urban space issues is a design collaborative... working together, to create public art... this is the idea of design team where each one of those voices is to be heard.

It can't be a unique vision if you have nothing to bring to the table.

If education becomes too narrow, too discipline specific, I personally don't think that it will service the idea of design in the twenty-first century.

Daniel Boyarski interviewed by author

February 29, 2000

Carnegie Mellon University, Pittsburgh Pennsylvania

ST: What is the state of design education in the US today?
DB: I think it is definately in a state of transition and in some instances it is in dire straights. Some schools are in this state of transition and other schools are coming to the crossroads and scared as the dickens not knowing which way to go.

I perceive the situation to be something like this: many design programs, especially undergraduate programs, tend to be formalistic, where time is spent on formal issues, in some cases even to the exclusion of thinking about the context of the design project. Who is this for? Why will it be used? How will it be used? When will it be used? In other words, really understanding the client needs and audience intent before you can really give form to that artifact. Too often I have seen undergraduate programs lopping off that first question, who is the client? who's the audience? and going directly to the artifact. Make a good poster, make a good schedule, good book layout or web site and so on and focus really on the formal issues. Critiques tend to sound like maybe the text should be moved to the right or the red should be more intense instead of have you shown the schedule to someone at the bus stop and seen if they can find when the 36 b comes. so issues of usability are rarely asked. Issues of aesthetics are raised. I think that many undergraduate programs are still that way. If they continue that way, design will continue to be marginalized.

The more mature our programs become in raising issues of usability, issues of who the audience are, we will become much more relevant as a discipline to other disciplines that we will be collaborating with and be much more relevant to clients, to companies, to government, so that they begin to understand that we are not a frilly activity over there. We are not decorating. We are not artists. We are in fact problem-solvers. Some people have trouble with that term; I think we do solve problems. We have methods of solving problems. More and more I subscribe to Herb Simon's definition of design. Where he says, in essence, design is that activity which changes one condition into a preferred condition. If you think of it in that way you can see that visual designers are not the only designers; you can have software designers, marketing designers, engineering designers and so on. We don't own the word design. Some places still believe that they do. The design activity is common to many disciplines. That is why you have graphic design, communication design, interaction design to begin to qualify what one does.

Graduate education is where the distinctions are really apparent. Graduate students would have a macro view on the world. They have chance to tackle problems that are complex and multifaceted. One must look at a problem with a larger strategy. Communication under many media guises. Understand the abilities of each media. We replicate information from paper to web.

ST: Is there one book you would recommend to students or new faculty?
DB: No I have resisted that over the years. I have a reading list. No one book is the bible. Design is not one succinct activity so you can't.

ST: Should design education tailor to industry or lead industry?
DB: To lead industry is the noble goal. Because we don't keep up with all of the latest issues and the technology, to believe that we lead industry is a fallacy. I think that better still we ally with industry. And together we learn from each other. We have a lot to contribute to companies, but at the same time by keeping up with companies we can learn from their research. The kinds of projects that we do... we accept projects from companies that ask us to think in the future and to explore new areas.

ST: The computer is introduced to students during their sophomore year...
What are the pros and cons?
DB: When do we use computers as tools or as a medium within design problems? In the freshmen year within the design courses they don't use computers by and large. They are drawing by hand, making models by hand. They are designing by hand. In the sophomore year we have a typography course where they bring in laser printed sketches. Karen talks about hierarchy or compositional issues with them, or sometimes leading or letterspacing. At the same time, they are getting to know the computer programs.

I think we still would like them to sketch ideas out by hand or generate lots of ideas by hand.

I have taught basic typography and I have some exercises where we pull text into a column and look at line spacing. You can't sketch that out by hand. I am very specific about what I am looking for. It is very mechanical, a mindless task. I want them to do it because I am teaching them to look. I am educating this (points to his eye) not educating this (his hand). I want them to see the difference between one point, two point, and three point leading; to see the difference between this typeface and that one. These exercises make them more proficient on the computer and in that particular software. They need to be concerned with looking, and not with [which key to press.] I think that the earlier we introduce them to the computer, and to teach them how to use it, it then becomes second nature to them. And frankly, that will be a moot issue in a few years. More and more high school and grade school students are growing up with computers so they are not anything new really. A particular software might be new to them but using computers will not be new to them. This will change our thinking there.

I think that this dilemma, back to your first question about the state of graphic design education, we still have a population of design educators who were taught the other way. I am not going to say the old way or the new way. I was taught to work with my hands and I still do. I also work on the computer. But I noticed that with colleagues around the country that it is comfortable to teach in the manner of

how you were taught. Many favorite projects are the ones that they did as a student. Rarely do we step back and ask if this is still relevant today.

What I tried to do with a colleague ten years ago or more when the Macintosh was introduced, was to look at what we were doing in typography class with handset type and see what we could replicate, what we want them to learn, which is to train their eyes. Can we do that on the computer? And actually we could. And dammit, we saved time. They were able to do handset type, a long paragraph, justified, rag right and different line spacing. It took them an entire semester to do that, simply because it took time to move the little things around. Now it took them three weeks. Now tell me that that's not using the technology for what's unique about it. Also at the same time, we could do a whole lot more.

What this transition period is is to realize, to ask ourselves what is it we want them to learn? How can we achieve that with new technology? I think that much of that can be achieved with new technologies. It is how we teach, that is the critical thing, not what tools they use. I don't see the computer as an impediment really. Sometimes I think the teacher is the impediment.

Some people have made the transition and see it [the computer] as another tool, another t-square, another paste-up table and so on. But they fail to realize that it is a medium in itself and what you are designing isn't going to leave the screen, it has a life on the screen and only on the screen. That is what I am interested in. I am interested in finding what is unique to that media that is not a replication of paper or a 3-d space. We are in fact finding some of those answers but we have a long way to go. I'd be less concerned with learning the software. I'd be more interested in you understanding what the issues are.

Thirty years ago when I was in schools I was taught to... my main elements were type and image. I moved them around in good combinations, effective combinations, on pages for the best communication. Now you and your peers in the future will not just have type and image but you will have sound and motion as well. I believe that you will deal with those more than just type and image. My big thing is learning how to design with time as a design element. I have a course called Time, Motion and Communication where that is precisely what we are looking at. What does it mean to put together a piece of communication when time is an element that you have to design with. It's absolutely amazing. It touches web design, it touches CD Rom design, it touches multimedia, anything that it time-based.

ST: Some schools have art and design students together. Are there liberal arts kinds of benefits to this or do you think that having design student only helps them focus?
DB: When you have just design students you can focus on issues that are specific to design but at the same time one can argue that there are issues that are not just unique to design. There is an interdisciplinary course taught in the spring semester that is team-taught by one faculty from each of our five schools within the school of

fine arts. That includes Architecture, Art, Drama, Design and Music. They have an equal number of students from these. And one year, for example, they focused on rhythm: rhythm in music, rhythm in architecture, rhythm in design. It was great. This was a sophomore level course. In a way, what those students learned was a focus on issues of rhythm. What's more important is for them to appreciate what an architect thinks about when they look at a row of columns, a row of windows, a sequence of arches. That is simular to a musician dealing with rhythm in a piece of music and is that much different from a designer going with a series of pages. That I think would be terribly enriching, really wonderful. If we can have those kind of moments throughout the four years. And don't just reserve them for the freshman year. It would be great to get seniors who are much more involved in their discipline to then maybe come together.

Again I think these are remnants of old systems where many design programs are embedded within art departments, because they are part of small schools or there is not a large design faculty so they are a part of... or the freshman year is shared between art and design. I have been in that mode before. What a lost year, we have to start from scratch. There maybe it was just the structure and the people teaching in the first year not really understanding what the different disciplines want from that first year because that can be an incredibly rich year. I am not sure that design has to own that first year. I am perfectly happy that we have our students all four years. I wouldn't easily give that up. It is not just studio courses. We have courses like Design Thinking, The Human Experience in Design which are seminar type courses which introduces them to conceptual issues in design. To me, for example, one of the big lessons in The Human Experience in Design is that you are designing for human beings. You are not designing for yourself, you are not designing for other designers, but for normal people out there. If that is the one lesson that they learn from that course, it is a very important lesson. That should happen early on, not at the end.

ST: Formal issues?
DB: You have to train the eyes to see the tension and what worked, what doesn't work. But now that you have content, words, whether they are images, color and so on, then you can begin to talk about those issues and then move beyond that and say, what is the meaning? Does it make sense to juxtapose this next to that? Does it make sense to make the "W" really big? Then it starts to make sense. Four years being too short? Come on. Designers always work within constraints. That is a constraint; get the education in four years.

You can make the first year an exciting and relevant time for them. And get them really excited about communication design or industrial design.

Notes from a telephone interview with Rob Roy Kelly by the author
March 23, 2000

ST: What is the state of design education today?
RRK: Chaotic and uninformed.It is strange what is happening today. The computer has disrupted the graphic design process.

Notes: A friend of his generation is a designer working in New York City. The friend hires "geeks to use the computer. He tells them what to do and they like what he is telling them to do." Those young men on the computer do not see all of the beautiful things that happen on the way to the solution. At a gallery that they rented to show an important client a project, people gathered in one corner and asked Norman, "What software did you use here?" pointing to magic marker comps. They were surprised to hear that Norman did those by hand.

Notes: The dean at Michigan University in Ann Arbor decided that design basics were no longer required. The graduate students couldn't teach it and the faculty couldn't teach it. So the classes were to become optional. The students were to use computers instead.

ST: What is the role of Liberal Arts in a design education?
RRK: Every graphic designer of note has other interests: tropical fish, roses, astronomy...

But you can't teach both graphic design and the philosophy of life. A narrowly focused graphic design education is needed, expanding into liberal arts in graduate studies. In order to have interdisciplinary studies, you must have an understanding of a discipline.

ST: What is the role of the computer?
RRK: At Arizona State University students don't touch the computer in the first year. They may use computers, but not within the curriculum.

ST: Are there any books that you would recommend to new faculty?
RRK: No books. They do more damage to foundations studies than good because teachers borrow images without an understanding of the criteria for that image and an idea of how to teach it. They are the biggest mistake in the world.

ST: How does one become a foundations teacher?
RRK: I studied with Josef Albers and people coming out of Basel. Plus I have forty-five years of experience.

If I were to hire a teacher, I'd hire a teacher from the program with the strongest structure. They'd have a sound pedagogical base, strong vocabulary and a sense of sequence. Self-taught designers are not good teachers for the first two years of study because they don't know how they got there.

ST: What are the strongest programs?
RRK: University of the Arts. Ken Hiebert has left a solid base, even though he has retired. Rhode Island School of Design may have something.

First year programs are a waste of time. Graphic design has to teach everything in the sophomore year.

Notes: Kelly is learning every year. He retired in 1969 and saw the changes when he came back eight years later.

ST: What is the role of formalism?
RRK: Formalism is the basis for introductory study. Josef Albers saw foundations studies as being common to all areas of the arts such as architecture, design and painting. Albers' color course is the best structure for teaching foundations. He used exercises, not problems, to have the students explore with cut paper because it is faster than painting. He utilized demonstration.

Notes: At Arizona State University they emphasize hand and eye skills, learning principles of design and craft.

ST: Content and form together?
Notes: Kelly works with abstract theory, then applies it using a very theoretical application. For example, he tells the students to create a black and white shape with the illusion of three dimensions. The application carries content although it may be idealized or very theoretical.

All faculty need to reinforce a design education, not just in the first and second year.

Notes: Arizona State University has a foundations program that integrates architecture, industrial design, graphic design and a few other majors.

ST: No art students?
RRK: How can you have 18 sections taught by 18 graduate students? With graduate students, it is the blind leading the blind. The best teachers should teach in the first year. Teaching freshmen should not be considered a punishment for teachers.

The awful things are not new. There are ties in to a lot of other things. Attitudes toward education have changed. There is pressure on faculty to do research. Armin Hoffman would tell his students when they came to America "Have skin like the elephant." If you go into teaching, I would tell you to "Have skin like the elephant."

John Malinoski interviewed by author via e-mail

March 23, 2000

ST: What do you think about the state of graphic design education today?

JM: i think there are far too many schools in the states offering programs in graphic design.if i was searching for a program to study within i would place accountability on that program by assessing:

alumni careers

faculty research programs

student portfolios

faculty portfolios

department/community efforts

curriculum outlines

visiting scholar and critic programs

international and national activities

spirit and community of the place

resources, facilities and their use

traditions

interdisciplinary activity

mission and articulation of program objectives

ST: What is the role of the computer in this?
JM: I tend to de-emphasize the role of the computer.Don't get me wrong—you need to know how to use it.But with wrongful computer overdrive, something will have to give,and this is what I see that needs desperate attention:

acknowledgement of quality and tangible creative problem-solving processes

alternative methods of problem solving

research and understanding of content

ability to articulate and formulate concepts and communication goals

observation, reverence and practice of formal exercises and influences

critical articulation skills

my classes use the computer at the tail end of their studio processes it facilitates the photomechanical/printed example

ST: What role does formalism - a set of rules, methods and practices, which together define a visual form acceptable to a group of people - play in design education?
JM: a strong set of formalistic rules should be learned and understood as fundamental to advanced problem-solving.i challenge the understanding that one set of "rules" should be presented as superior set. what is also important is for students to begin to develop their own value system with respect for other value systems. value systems should be justifiable through one's own articulation those that have a value system and yield little justification, of a substance akin to swiss cheese, i tend to dismiss and and ultimately toss into a pile of contempt. a value

system should include an understanding of conceptual, formal and communicative assertations

ST: What is the role of the foundation program in a graphic design education?
to begin to develop a students formal, conceptual, technical and communicative skills for students to have a thorough, experiential study with materials and ideas

ST: Do you have any favorite books that you would recommend to new design teachers?
JM: dr. seuss
colors magazine
old life magazines
emil ruder
armin hofmann
paul rand
essays from contemporary dutch practitioners
graphic design history books — roger's stuff, the meggs classic
basic typography books

stay away from survey books, best of books, and popular graphic design magazines read the new york times on sunday and read why most of the early avant garde guys were communists and how such political and philosophical thought impacted their practices as visual communicators.

hope this helps
this by no means is a finished work only the tip of an indefinite iceberg

Notes from an interview with Mark Mentzer by author

February 28, 2000

Carnegie Mellon University, Pittsburgh Pennsylvania

Notes: Here at Carnegie Mellon we moved from the term graphic design to communication design five years ago. The state of design education is undergoing tremendous change. (for example economy/demand and technology)

It is hard to attract teachers because of the booming economy. Carnegie Mellon University has been conducting a search for an industrial design teacher for two years. Interaction design also.

The state of design education is very healthy. It has moved from an art tradition to embrace the sciences, language and architecture. Boundaries are merging.

45% of the classes are in the liberal arts and sciences. This brings breadth and depth, encouraging students to look further and deeper.

Communication design is moving toward online with print support. Carnegie Mellon University still has letter presses. It helps if students understand history.

One third of their time is spent on history, criticism and theory.

They are preparing students for industry by preparing them to adapt to future change. Design is idea-driven: Why? How? What form? What technology or tool to deliver the message?

There are pockets of good design education programs and some stuck programs–those with a fine arts background.

We have struck the word "Foundations" from our vocabulary.

ST: Do you have any books that you would recommend?
MM: *Interface Design*, Meggs' *History of Design*, Tufte's work, Itten and Alber's books on color, Norman's *Psychology of Everyday Things* and *The Things That Make Us Smart*, Postman's *Technopoly* and *Amusing Ourselves to Death*, Buchanan's *Discovering Design*, Maier's books on the Basel school... 4 volumes, and *Basic Visual Concepts and Principles* by Wallshlaeger.

ST: The computer is introduced to students during their sophomore year... What are the pros and cons?
MM: Communications Design Students tend to run to the computer and drop off a cliff. This is a big problem, even for professionals. We need to convince the students to work things out by hand first.

Carnegie Mellon University was the first design school, beginning back in 1928. They began with an industrial design program because industry needed input on how products looked. The foundations program has evolved from this early history. The faculty looked at form, function, psychological presence, context, and even environmental issues. This made Carnegie Mellon University very different from other schools. Carnegie Mellon University has no design style. They focus instead on process, context and communication. Other schools have criticized Carnegie Mellon University for not having a style. Carnegie Mellon University students often end up in management positions because they can ask the right questions.

Carnegie Mellon University prides itself in providing entry-level skills and a higher level of ability to look at the big picture. It is a design school in the context of a University. There are multiple points of view.

Notes: Technology is second nature to the students. They need to see it in the proper light—not McCluhan— but a blending of concept and realization: "thinking and making"
>people
>economics
>media
>adapting: where is it needed

MM: To educate someone for today is not good.

ST: What about Formalism?
MM: Formalism: "visual givens" of point line plane "visual values"
The dimensions have changed; time, motion, kinetics are imbedded into the culture.

MM: I firmly believe that there are no rules. There are principles. There is "it" and "not it" [figure ground]. Also scale, position.

Pushing the envelope "rules are meant to be broken"

Notes: Mentzer is consciously not teaching formalism. He is teaching how to have many styles. Formalism: "visual values" implies good and bad design. But you cannot separate form from its context.

MM: There is a Korean School that has taken the Parson's program and implemented it there. What worked in the USA doesn't work in Korea. Students want to learn western culture but really they need to absorb it and rethink it in terms of their own culture. You can't just lift it. When formalism is lifted it is a problem. There is no snap, crackle or pop in the designs there and they know it.

When art students and design students study the freshman year together...
Here you see the separating of formal issue from content. Now Carnegie Mellon University combines the two from day one.Students are not just learning a visual

vocabulary then applying it later. They are using both from the first day.
MM: Just the formal route is a dead end. Just the content route is a dead end.
See both together. The more separate these two are the harder it is for a student to learn.

ST: What is the state of design education today?
The philosophical reasons behind art and design should be examined.
Communication takes two people. It is about having an effect on a viewer.

Form in context
Context of project
Project to society

Notes: Transfer students often come in producing work, not conceiving it.

Carnegie Mellon University is a "leadership program", providing a vision of the bigger picture and where you are going.

Photography plays a role. They teach traditional and high tech photography, experimentation, form and meaning.

With formalism, teachers tweak what they need to know. Can't keep bright students chained to a desk.

Students spend more time in liberal arts classes so that they see more and are exposed to a lot more.

In drawing for example, students might not be perfect at drafting. They may be adequate visualizers, but not experts. They can do the task proficiently and meaningfully. The school is cutting back.

Today students are up and running with technology skills. They have to unlearn the notion that if it is done on the computer it is designed. Without the computer, ideas are less fixed; experience all of the senses, look at pure form, pure line.

Vocabulary is very big at Carnegie Mellon University. The first semester they work to establish a community, building a visual and verbal vocabulary. Students start as professionals on day one. They join the larger group; all are working on the same big things. There is empathy with professionals.

They work within an oral community. Some of it is written. Students are asked to write about the juxtaposition of two images. They add text to images (meaning). Not purely formal.

Notes from a telephone interview with Candice Wolff Sanders by the author March, 2000

ST: What is the state of graphic design education today?
CWS: It is in a state of transformation. It needs to adapt itself to changing students' needs.

Notes: University of Rochester students learn form, fractal geometry, chaos theory, perspective, color theory. Also media work, including 3-D, animation and computer graphic design. The program has been in existence for two years now. The deans are very supportive. The program is not a major, but rather a humanities cluster. There are four standard courses. She is developing two more. There will be an advanced graphic design course in the spring. Sanders is the only one teaching.

ST: Do you have any favorite books that you recommend for new teachers or students?
CWS: There is a need for renovation in the area. A textbook on fractals, artists' work, sculpture, architecture, and internet resources are shown in class. They do have textbooks, for example on digital photography, but they are often outdated before they can be used. Students feel more secure when using Quickstart guides when learning new software.

Things are changing with software; flexibility is important.

Notes from a telephone interview with Mark Siprut by the author

April, 2000

ST: San Diego State University students spend a lot of time studying liberal arts. Does this help them become better designers?
MS: Yes.

ST: Would you recommend any books for educators or students?
MS: The books about electronic stuff is a mish-mosh. I don't care for the technical ones. For our digital media class, the syllabus is online at www.art.sdsu.edu/courses/art240/index.html. Books on technology are expensive; shop around.

At San Deigo State University, the curriculum has been recently redesigned. At the 341 level, students branch out and mix and match courses in design specialties. The number of courses is still twelve. They must take two related courses. This mixes advanced students with inexperienced students.

ST: You have done some international collaborative projects. Could you tell me more about one of these experiences?
MS: These are very hard to do. While I was in Turkey, we collaborated with SDSU students. The students sent photos back and forth. Working in Photoshop, they put each other in the corresponding environment. For example, photos of Turkish students were placed on typical Southern Californian landscapes and vice versa.

I am having a dialogue with another Turkish faculty member to try again. We are also working on an international exchange program with the school in Turkey.

ST: When do SDSU students use the computer within the design curriculum?
MS: An elective, Art 240 is a survey of digital media. Here they learn all of the software. Most students learn the computer on their own. The program focuses on creative problem-solving, using the computer as a tool.

Robert O. Swinehart interviewed by author

February 29, 2000

Carnegie Mellon University, Pittsburgh Pennsylvania

ST: What do you think about the state of design education today?
ROS: How much time do I have?

One of the things is that transition and that change require us to change too. Sometimes it is changing what we do, in other words it's content. It is changing how we do what we do which is process and methodology. One, I think overall we are finding here that we are getting a brighter student overall. Overall as a unit the highest in the University. Everybody's been wondering, "why does design deserve this?" We think that design is one of those domains that has literally found its home in everybody else's domain. Students that would have gone into other domains have seen design and they like it. Therefore we have people considering what design might be. And they are coming from broader backgrounds.

ST: Not just art?
ROS: Some cases we are admitting students on their portfolios. There will be more students coming from different backgrounds. What are the other areas to attract people. There is not a significant source from other areas yet to be looked at. We are seeing people from these other areas trickle in. Most of those other people fight to put together some sort of visual portfolio. We have a test packet for students who don't have a portfolio.

I think that we feel that design is something that has a broader appeal than ever before, therefore we are going to get a brighter student. Then we have a student that is less likely to accept the kinds of design education that we have had in the past. So all students are more computer literate, at least savvy technology wise. Things come to them quicker. The analogy is that they are able to get a lot of information surfing the channels, flicking through things. They also see other information at the same kind of speed. Is it right or wrong? I don't know; it is just different. So therefore, they are less patient to do the kinds of projects that we have done in the past. We have cut a lot of things back, sometimes even made sacrifices. Now are we not accepting the quality based on an old set of standards? Or quality that is acceptable? Acceptable in this time frame where we live. It seems to be a qualm (sic).

Where is it going? Certainly in change. We have got to be more effective, we have to change more. We found that our overall curriculum in four years went, [from] ten years ago where roughly 80% of the student's time was spent in studio, to 62%. The rest is electives on the outside which we feel are necessary to be educated, critical thinking, problem-solving. What have we given up? Probably less than we have put into the curriculum. Time means that we have had to modify, crunch, change, scrunch and sometime just get rid of it or be better at it.

Personally I think we are at the beginning of this, not at the middle or at the end of this. Who is going to be teaching this? What are they going to be teaching? A University of Pittsburgh survey said that there are less faculty that qualify for tenure than ever before. Does this mean they are having more adjunct faculty? A traditional feeling is that if you don't have enough faculty with tenure then you are allowing the administration to define how and what is taught. What will come of this I don't know.

I think that design education has to change. We knew this from the old GDEA that there were roughly 1,000 undergraduate programs in the country of which only a handful are worth anything. Why do those other ones even exist? There is still another 2,500 two-year programs, community colleges or junior colleges. They are still growing.

Now in the last three or four years everyone can get placed because of the new digital technology. It used to be that it took a year to find a job. Now that is unheard of.

ST: Do you have any favorite Books?
ROS: I have a big reading list. It is hard to say. Not any one.

ST: What role does formalism play in design education?
ROS: I think that it is important. I think that we are wrestling with that throughout the educational structure, particularly with the freshmen. There are those who feel it is form-based and those who feel it is experiential-based. I believe it has to deal with form.We are still teaching a discipline. It may not all be hand [work]. There is less hand than before. Certainly doing things by hand makes you focus on slowing things down and being aware of what you are doing instead of point, drag and click where you don't understand what you did because it is already gone. So it is also interesting to see the number of design firms that are looking for handset type capabilities... it is more for the standpoint that designers enjoy the therapy of slowing down. It is still design.

ST: Education should lead or follow industry?
ROS: We know that we are not looking to follow.In order for it to not follow it will have to increase in research, increase its ability to model design solutions that are not simply the solutions to old problems but to visualize and model new situations and new scenarios that have value in a variety of contexts. Also too, we need to become more academic, and we have our grads do a written thesis and a project thesis both. We have just approved a Ph.D. program.

ST: Is vocabulary a big part?
ROS: There probably has to be more. It would be something that people would have to agree to. We have a lot of people coming and going in that year; it needs re-evaluation. The vocabulary is the vocabulary of whoever is teaching it. Many of the faculty do not want to teach all of them anyway.

ST: When the computer is used as a tool in communication design, do you find pitfalls or growth?
ROS: Most of the students come in savvy to the computer. About 30% do not have the skills. With Director for the Virtual identity project I will arrange for a tutorial, a refresher tutorial. Ok this is it. Most schools, they get in there and look over each other's shoulders. It is not the best way but it is one of the ways that we have gotten down from 80% to 60%. The computer is not as important as the content.

That demand to have a project done is a huge motivation to try and learn.
We could do more than we do.

Where? What time slot? What do we cut out to put that in there.

ST: The flip book and the sound project...
ROS: Again it comes from the stand point of what the students are going to need to be aware of and another thing is with bright students. This goes back to the formalism quality. Students are not patient enough to sit down to go through the lengthy process of just drawing, drawing, drawing, to refine shapes. Part of what they do is get tired of it and feel that it is not as important as it should be. We have to be patient with them because it is not quick. With every project that I have, I have something that they get to bring to it. With this language project, they brought in a bottle. It was their choice. I was up front about what they were going to do with it. With the hero project, they have some say in who they are going to use, having the problem different for each person, personalizing it so they have brought something and therefore have stake in it. The idea that they are a stakeholder. This takes more time to go through the process.

ST: UArts have art and design foundations merged... benefits or slows down the learning?
ROS: We used to be in the art department. It was '76 or so and the dean got mad, pulled out a piece of paper and created the design department. It was painting design and sculpture.

Then, as a measure, the year I was acting head of the department, was a strife-ridden year because the provost had said "you will look into combining the foundation year with art." One, he was looking to make a more unified college. All he did was look and see that there were drawing courses here and drawing courses there, a design course here and there, hey they are all together, not knowing that here were philosophies that were (crunch sound). They did; they said that hell is going to freeze over and the sun will never rise in the east again if you guys don't. So you will. It stayed that way for about 6 years then just began to fall apart. It was not good for us. The curriculum was drawn up that we didn't believe in and stuff that they didn't believe in. Then you start deciding who is teaching what. Those in art saw the design stuff and said that's bullshit and us in design saw the art stuff as bullshit. And we were still going in and teaching and yet when these students... (There were more art students than design students so there were more art

teachers than design...) They were all mixed up. When you get them in the sophomore year, you don't know what they had. Some had skills and some didn't. some had a good education some didn't. The better students were probably better because they were just better. Those who weren't had problems. The comment was that we have to write off the first year. The Sophomore year was redoing the foundation in one semester. It got changed with the change of administration. I don't think we are crossing that bridge again.

Student Questionnaires

What year/level are you in your studies?
Senior

What is your major?
Graphic Design

What school did you attend freshman year?
RIT

What is the most important thing that you learned freshman year?
Presentation, craftsmanship, attention to detail and how to work hard.

What do you think should be taught freshman year?
The foundation should be kept broad, but should delve into the what being a graphic designer (and all other majors) will entail. Not to take courses in them, but to get an overview of what they will be like. I didn't really know what graphic design was until I tried it after double majoring (illustration/graphic design).

What year/level are you in your studies?
Currently I am a Senior in the College of Imaging Arts & Sciences.

What is your major?
My Major is Graphic Design.

What school did you attend freshman year?
I attended the University of Toledo in my freshman year, majoring in communications, specifically Public Relations.

What is the most important thing that you learned freshman year?
The most important thing I learned freshman year was interpersonal communication and how it is achieved effectively. This is key in creating any kind of personal or business relationship that you want to be successful in.

What do you think should be taught freshman year?
What I find the most lacking here at RIT is that graphic designers are not taught how to present their work, let alone make presentations period. Half of the job is presenting what you have created. Without that hard sell, your work will undoubtedly be passed over for someone who is more outgoing and comfortable in presenting their design work. What should be taught freshman year are two particular courses that I found helped me the most. "The Creative Process", which was originally a theatre class, is designed to get you out of your shell and in front of an audience by performing either improv, or actual skits that are written. This class

not only helped me to put forth creative energy towards making an effective performance, but into actually PRESENTING it as well.

"Interpersonal Communication" was the best class I ever had. It looked at not only the verbal, but the nonverbal communication schemes that people use, and the situations that they use them in. It shows you how to reach "optimum communication" and that reaching such a thing is not always possible. It gave me the skills necessary to be aware of what I say and how I say it, so that when presenting my work, I present it in the most positive light possible.

What year/level are you in your studies?
4th year

What is your major?
graphic design

What school did you attend freshman year?
RIT

What is the most important thing that you learned freshman year?
My freshman year wasn't that exciting - I learned only some basic things.

What do you think should be taught freshman year?
I think if you are studying graphic design, you should be taught how to use computers right away in the beginning of the freshman year, not wait until sophomore as it happened to me and my other classmates. Also it would be nice to learn history of graphic design and study basics of graphic design and take some electives to learn a little bit about each major if you aren't sure which one you would like to pick. I think now the new program for freshmen improved.

What year/level are you in your studies?
Senior

What is your major?
Graphic Design

What school did you attend freshman year?
Westchester Community College

What is the most important thing that you learned freshman year?
Using the computer (windows-paint & designer) as another tool for drawing

What do you think should be taught freshman year?
For graphic design majors?—An intro to the profession, to see if you are in

the right major. I had no idea what Graphic Design really was until sophomore year. However, I think that it is important to also teach basic drawing, 2-D, and 3-D classes, as well as an intro to Quark, Illustrator or Freehand, and Photoshop. By the time students are Juniors they shouldn't have to struggle with software, they should be concentrating on pure design.

What year/level are you in your studies?
Second year grad

What is your major?
Graphic Design

What school did you attend freshman year?
Loyola University, New Orleans

What is the most important thing that you learned freshman year?
I hardly remember, but color theory was good, 3-D modeling, and just basic principles of formal art issues.

What do you think should be taught freshman year?
I almost think that freshman should start out with Drawing classes like still life, figure, etc., then get into sculpture or ceramics (where you are dealing with a 3-D form) then do foundations classes after completing these. This way, you have practical courses and skills to base it on. In my own experience I feel that if I had taken these courses first, more of what I had learned in Foundations would have sunk in, also would have developed my technique more fully in order to apply it to the foundations courses.

What year/level are you in your studies?
Fourth year.

What is your major?
Graphic Design

What school did you attend freshman year?
RIT

What is the most important thing that you learned freshman year?
How to live w/ people you can't stand!

What do you think should be taught freshman year?
i think we need to focus earlier on our majors, along with the foundation classes.

_____

What year/level are you in your studies?
I am in my fourth year/level.

What is your major?
My major is Graphic Design.

What school did you attend freshman year?
I attended MCC (Monroe Community College) in my freshman year.

What is the most important thing that you learned freshman year?
The most important thing I learned in my freshman year was "Time Management."

What do you think should be taught freshman year?
I think a concentration of the 'basics' of design should be taught in the Freshman year, which is not much different than how it was for me. I would say that having a student be involved with the Photo and Print areas would be beneficial. Maybe having someone from the area give a lecture, or having a project in which the student works in collaboration with a photo or print student.

_____

What year/level are you in your studies?
2nd year graduate level

What is your major?
Graphic design

What school did you attend freshman year?
New England College

What is the most important thing that you learned freshman year?
Do not remember - but I am sure it was something about being so far away from home.

What do you think should be taught freshman year?
Graphic design.

What year/level are you in your studies?
4

What is your major?
Graphic Design

What school did you attend freshman year?
RIT

What is the most important thing that you learned freshman year?

The most important thing i learned freshman year was the basics in color and form. my high school had an exceptional art program (AP Studio), so i came to college with a strong background. unfortunately, not everyone had that opportunity. with that in mind, i think the freshman level courses (drawing, 2-d and 3-d) were a good foundation. i hear that RIT now has computer classes at the freshman level. i do not think this is such a good idea. with some people having no art background, and others not fully developed, it skips over the aesthetic values right to the technical. aesthetic values and goes right to the technical. i would have liked over the aesthetic values and moved right to the technically developed, the freshman level classes gave a good foundation.

What do you think should be taught freshman year?
i would have liked to learn freshman year the technical considerations designers face when working with the computer-resolution, color settings, memory, file size and type of files, which programs are best for which job, printing consideration, like scanning, color correcting, etc. these things were learned as the years went on. it would have been helpful to learn these things before i even got to the computer. this is why learning the technical, without working on the computer but by hand, would have made my computer designs more successful. this is an earful.

What year/level are you in your studies?
4

What is your major?
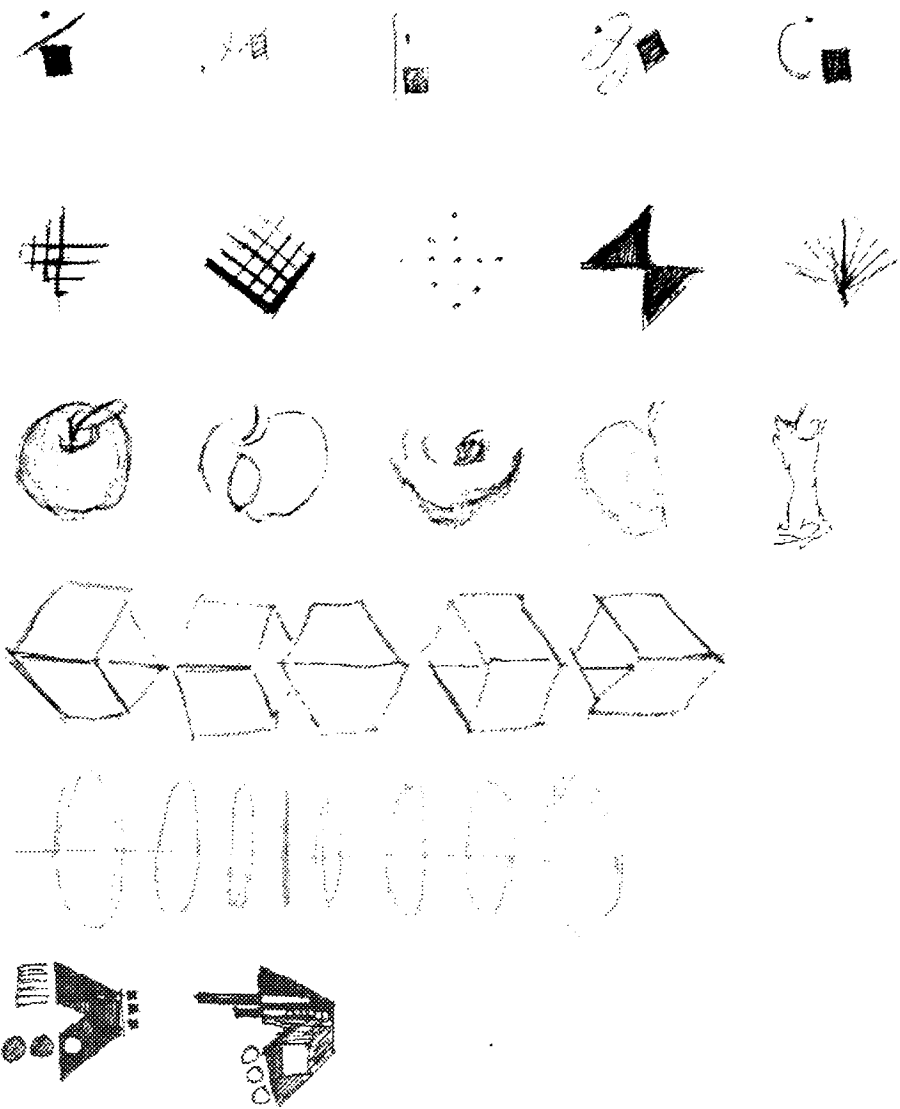Graphic Design

What school did you attend freshman year?
CIAS at RIT

What is the most important thing that you learned freshman year?
a wide variety of art/design...from 2d to 3d to drawing....good foundation

What do you think should be taught freshman year?
Maybe a little more computer skills... more design emphasis here and there, but I think that they have gotten more into computers since I was a freshman.

What year/level are you in your studies?
Second year grad

What is your major?
Graphic Design

What school did you attend freshman year?
Mercyhurst College

What is the most important thing that you learned freshman year?
Foundations taught me a lot about the fundamental elements of design: unity contrast, repetition, balance etc. I think it is good to gain a basic understanding of these and explore them (in class projects.)

What do you think should be taught freshman year?
I think that a lot of ideas/approaches shown here [in thesis exhibit] are very valuable – teach students to think (creatively) and solve problems ("Think beyond the box")

What year/level are you in your studies?
Sophomore

What is your major?
Industrial Design

What school did you attend freshman year?
Wentworth Institute of Technology

What is the most important thing that you learned freshman year?
how to draw

What do you think should be taught freshman year?
how to draw

What year/level are you in your studies?
senior

What is your major?
graphic design

What school did you attend freshman year?
Pensacola Christian College, Pensacola Florida

What is the most important thing that you learned freshman year?
Color theory, and the process of seeing vs. looking

What do you think should be taught freshman year?
specific program foundations, not broad general "art" foundations. The main thrust of a successful college education is for specifying ones knowledge, not introducing new areas of information i.e. jack of all trades master of none.

What year/level are you in your studies?
FOURTH YEAR

What is your major?
GRAPHIC DESIGN

What school did you attend freshman year?
RIT

What is the most important thing that you learned freshman year?
To be creative and to try things that are just whacked out. To be different in approaching my work.

What do you think should be taught freshman year?
It should focus on creative problem-solving. teaching students to take risks while at the same time teaching the fundamentals of drawing, color and basic design.

What year/level are you in your studies?
2 yr grad student

What is your major?
graphic design

What school did you attend freshman year?
Northwestern college as a fine art major

What is the most important thing that you learned freshman year?
how to draw- i.e. see

What do you think should be taught freshman year?
basic design and art skills; line, shape, form, color, drawing; computers as sophomore level
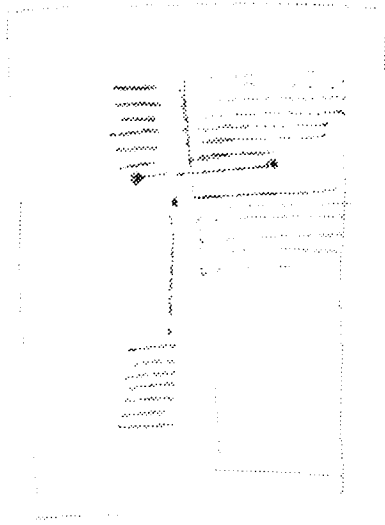
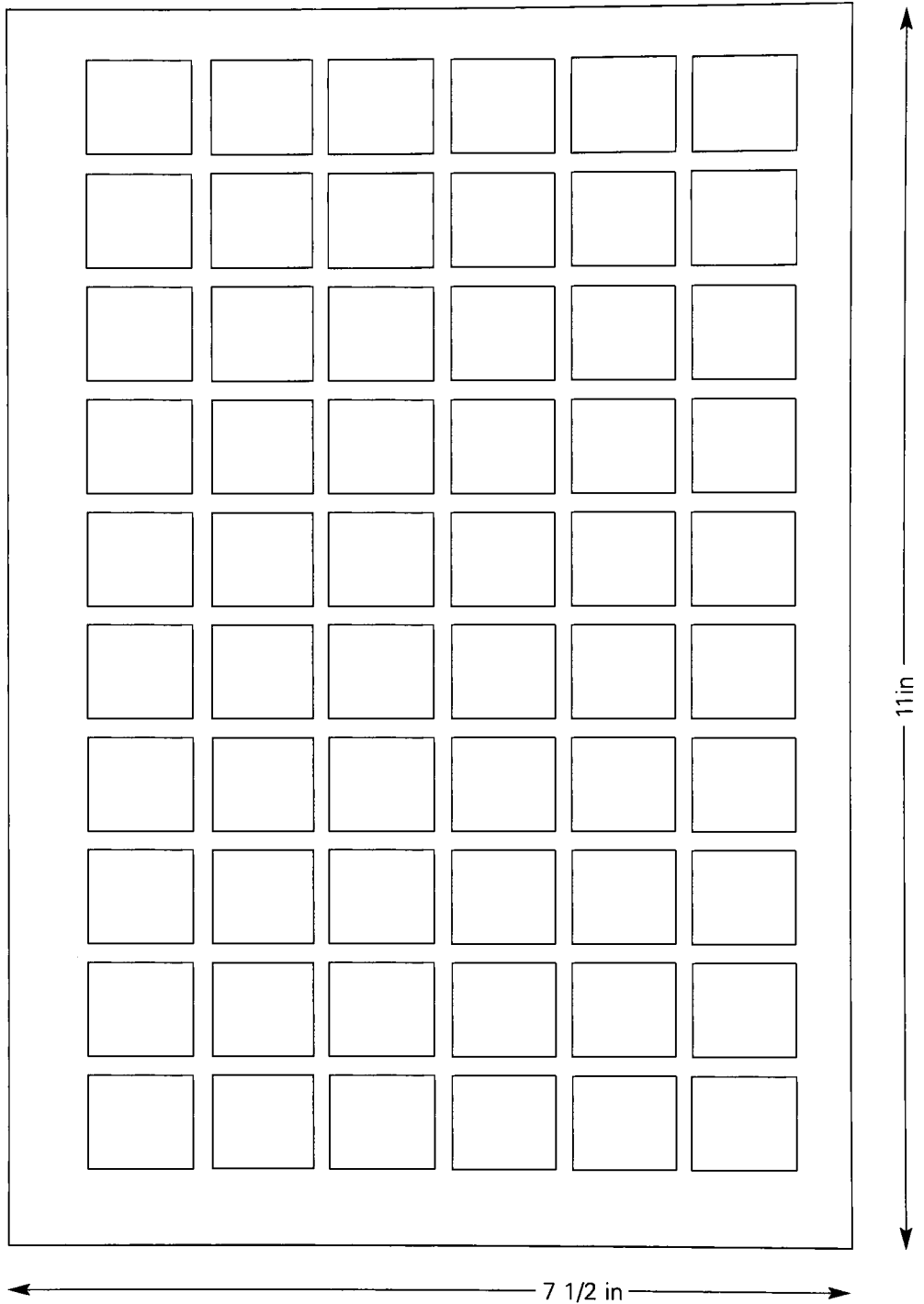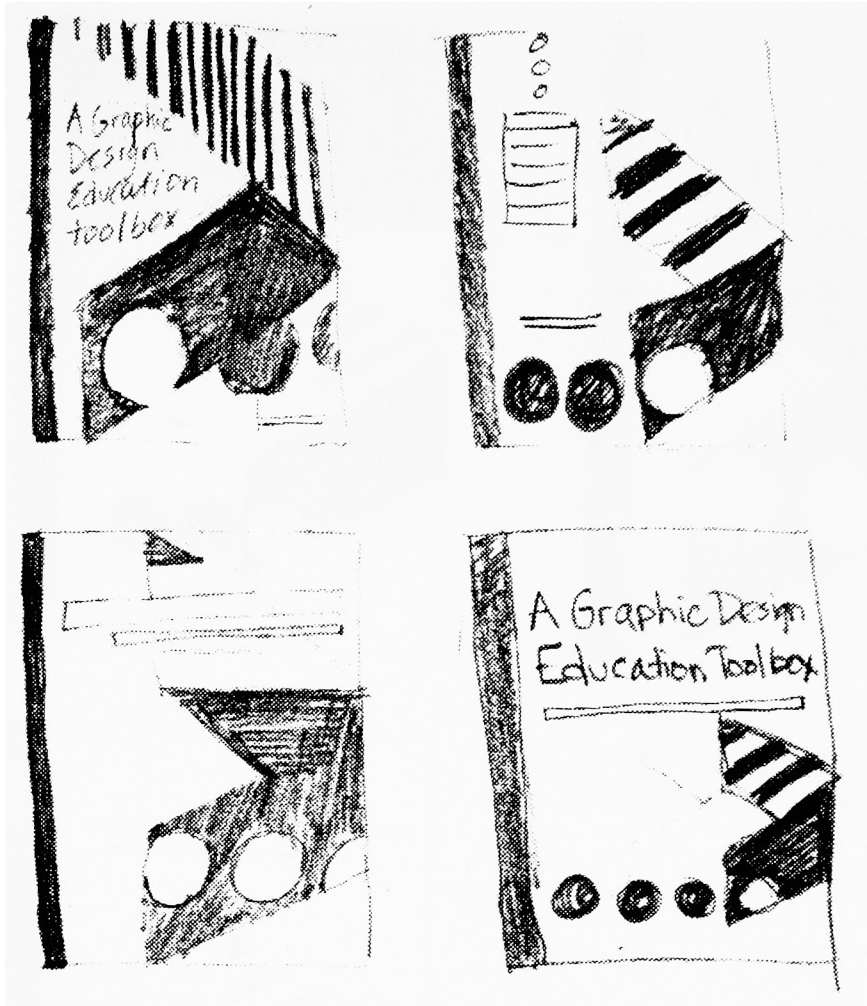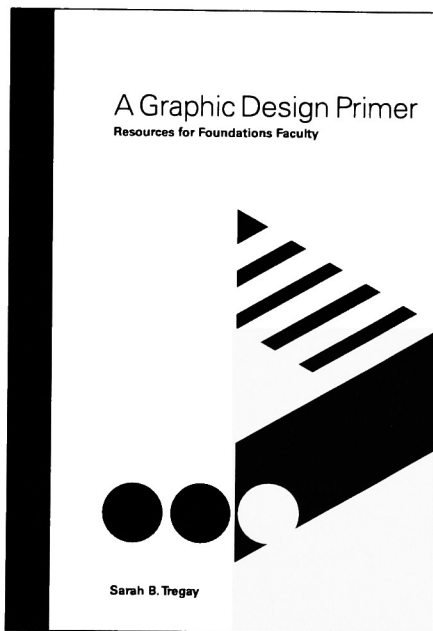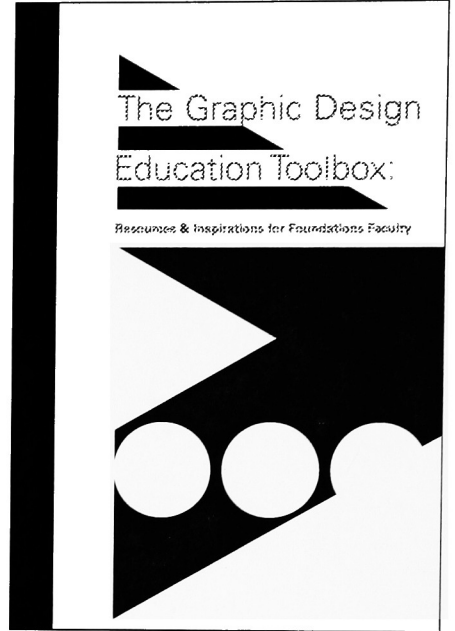Six variations of the symbol
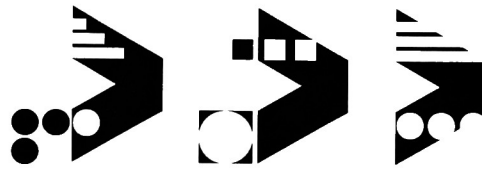
Six simplified variations
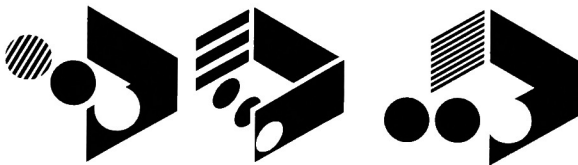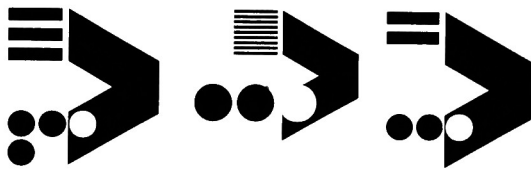
Six three-dimensional
symbol variations

11 in

7 1/2 in
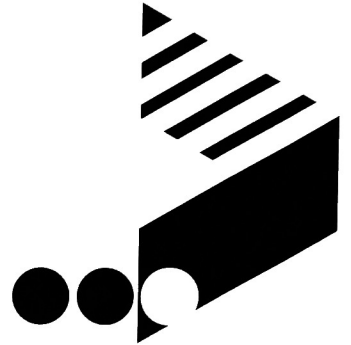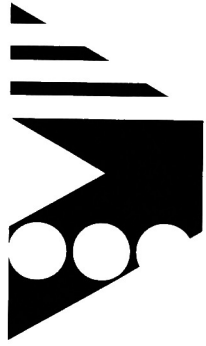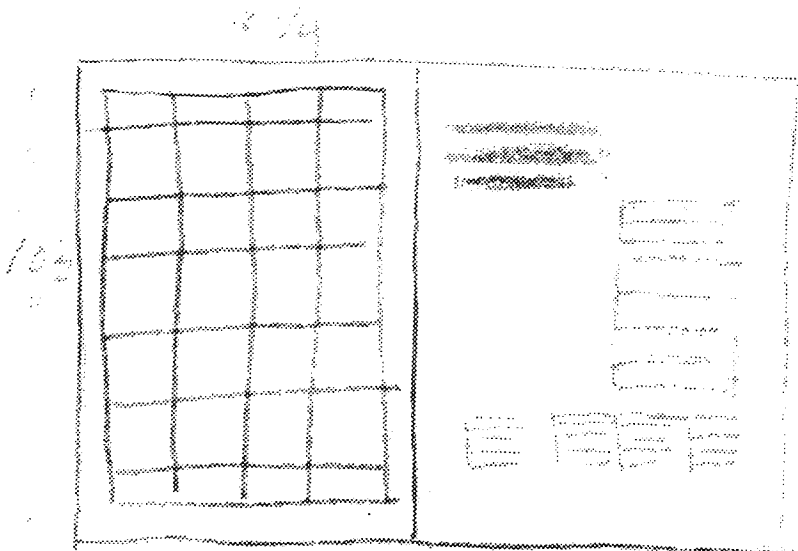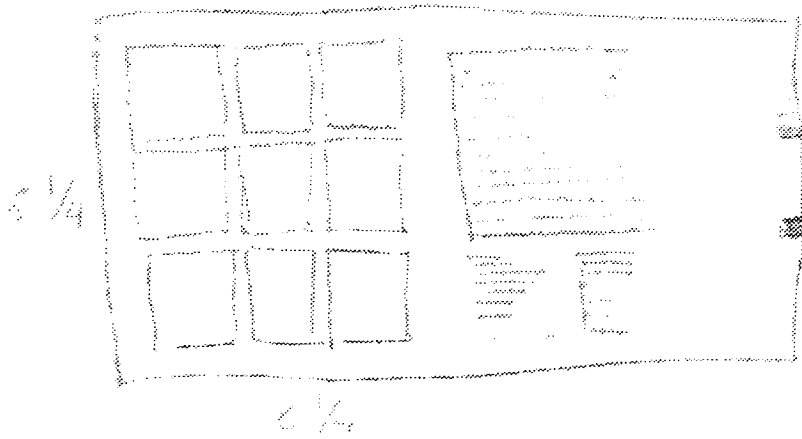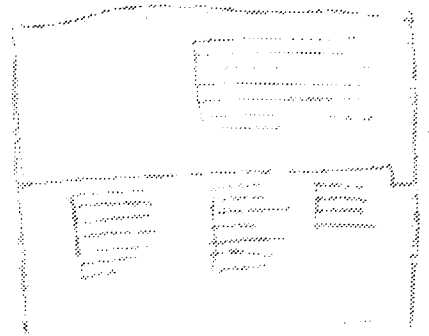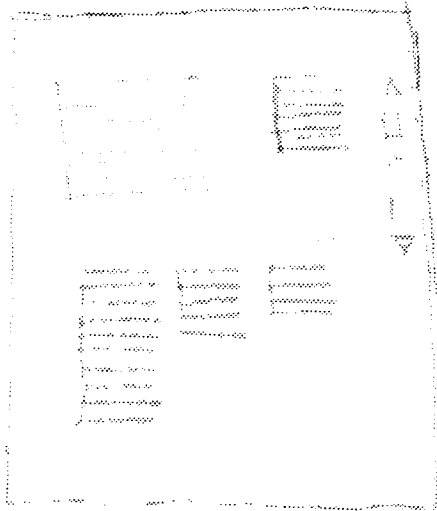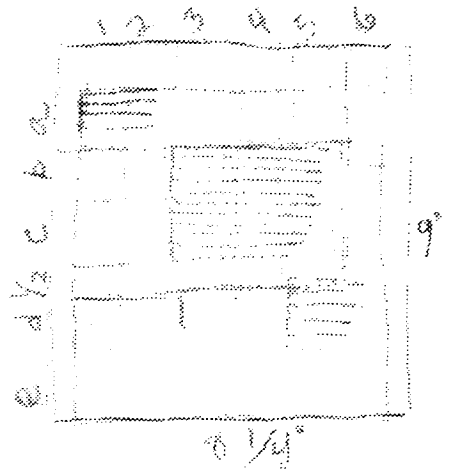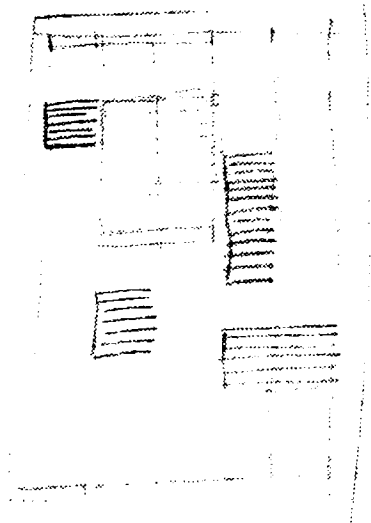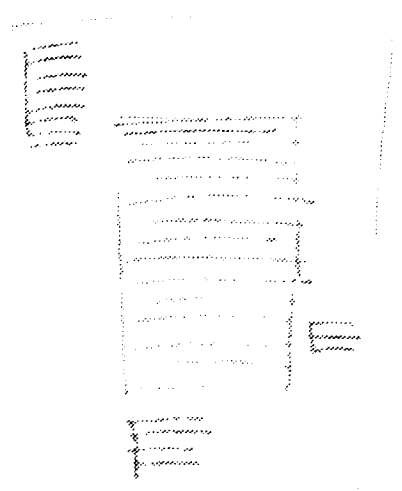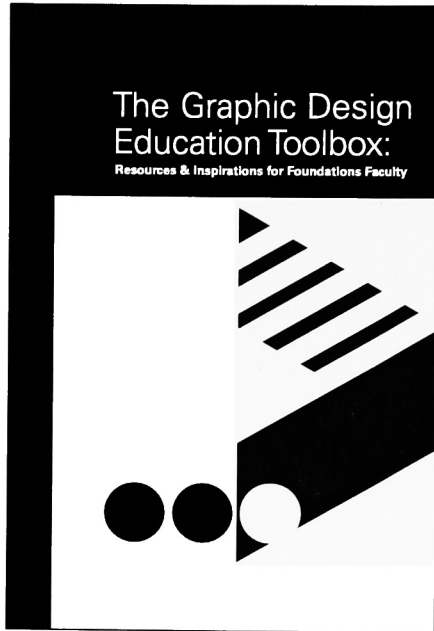
The cover on the lower left was chose for the final design.

Evaluation Forms

A Graphic Design Primer: Resources for Foundations Faculty
Evaluation Form 1

MFA candidate: Sarah B. Tregay (sbt8698@rit.edu)

Thank you for taking the time to evaluate my thesis application.
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   it to its final form. If you feel that it is easier to write your suggestions on the pages of the book, please do.
Evaluation forms and books may be returned to me via my mail folder which is located on the second floor of
   building 7A in the third bin from the left. If you have any questions or cannot find the time for this evaluation,
   please let me know via e-mail sbt8698@rit.edu, telephone 359-0683 or by placing a note in my mail folder.

Background information

1   What level(s) do you teach?
   ☑ freshmen   ☑ sophomores   ☑ juniors   ☐ seniors   ☐ continuing education   ✓ *graduates*

2   What courses do you teach?
   Art + Civilization / Forms of Inquiry / Graduate Forum

3   What is your educational background?
   M.F.A.
   Ph.D. – Art education

4   Outside of teaching, what type of artwork or design do you pursue?
   mixed media, clothing design

Content

5   In reviewing the book, did you agree or disagree with the information presented the following sections? Why?

   Defining graphic design (pages 1 & 2)
   ☐ Agree   ☑ Disagree
   Why? *I think graphic design is personal in respect to artist expressing self and at same time meeting client's needs.*
   What would you add to this section (if anything)? *Only graphic art or applied being client driven*
   What would you remove (if anything)? *e artists are driven by today's*

   Pg 3   *I think you can identify galleries, museums + patrons.*

   Art vs. design (page 3)   *design pol. soc. eco. + cul. trends in*
   ☐ Agree   ☐ Disagree   *when you look at design history*
   Why? *I would like to see study expanded*
   historically and this added ... *to information*
   What would you add to this section (if anything)? *about the similarities and differences*
   What would you remove (if anything)?

   Design education today (pages 5 - 9)
   ☐ Agree   ☑ Disagree   *I think less time developing traditional*
   Why? *art skills will surface in the graphic design*
   product at end of 4 yrs. I am in favor of broader
   What would you add to this section (if anything)? *liberal base of courses*
   but not at expense of skills + time
   What would you remove (if anything)? *to dev. those skills + time it takes*

Evaluation Form Continued

Foundations programs (pages 10 & 11)

☐ Agree ☐ Disagree *Statistics Nationwide reveal that*
Why? *Students (undergrad) change majors 3 times,*
therefore and exploration of our skills, choice
What would you add to this section (if anything)? *is on essential part*
of providing information about our careers.
What would you remove (if anything)?
most people will change careers 4 to 5 times

The role of formalism (pages 13 - 15)
☐ Agree ☐ Disagree *in their life. Again flexiability*
Why? *choice in Foundations program prepares then*
for new choices in career   later in life.
What would you add to this section (if anything)?
Retention rates of freshmen now needs to be
tested in next 4 - 5 years to evaluate changes
What would you remove (if anything)? *in retention and why? Also alum*
need to be surveyed now for satisfaction with

The role of the computer (pages 17 - 21) *future. New program for acquiring graduate data must be*
☐ Agree ☐ Disagree
Why? *well written*

What would you add to this section (if anything)? ———

What would you remove (if anything)?——

The needs of the design student (pages 23 - 27)
☐ Agree ☐ Disagree
Why? *Again well written*

What would you add to this section (if anything)? ——

What would you remove (if anything)?   —

6   Which part of the book was most interesting to you? *The layout and the*
obvious amount of time and research spent
☐ none *on thesis*

7   Did examples from colleges and universities contribute to the understanding of the topics?
☑ yes ☐ no

8   Do you feel that there were too many, enough or too few points-of-view from different educators and institutions were included in the book?
☐ too many ☑ enough ☐ too few *Need a professional to help*
collect data from other institutes plus
data from RIT students. The RIT
mathematics and statistics department
can help design process.

Evaluation Form Continued

9 Did you learn something new about foundations graphic design education?

☑ yes ☐ no

If yes, what did you learn?

Overall view of program / Foundations area
needs work and testing.

10 Do you think that this book would be useful for new foundations faculty?

☐ yes ☐ no I think Foundations and Graphic Design
need to work closely together so all faculty
understand and support curriculum.

If yes, why?

11 If copies of this book were made available to you, would you recommend them to your peers?

☐ yes ☐ no

Since I teach Art history and currently
am not a part of 2D/3D/Drawing Foundation
year, I do feel informed enough to
make a recommendation to the current
2D/3D/Drawing Foundations Faculty.

A Graphic Design Primer: Resources for Foundations Faculty

Evaluation Form 1

MFA candidate: Sarah B. Tregay (sbt8698@rit.edu)

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Background information

1 What level(s) do you teach?
   ☑ freshmen   ☐ sophomores   ☐ juniors   ☑ seniors   ☑ ~~continuing education~~ *grads*

2 What courses do you teach?
   Drawing
   Painting

3 What is your educational background?
   BFA
   MFA

4 Outside of teaching, what type of artwork or design do you pursue?
   Drawing
   Painting

Content

5 In reviewing the book, did you agree or disagree with the information presented the following sections? Why?

   Defining graphic design (pages 1 & 2)
   ☑ Agree   ☐ Disagree
   Why? *This section seems to define graphic design as I understand it*
   What would you add to this section (if anything)? *The definition could imply that graphic designers create*
   What would you remove (if anything)?

   Art vs. design (page 3)
   ☐ Agree   ☑ Disagree
   Why? *Good art is good design, if many or does communicate on multiple levels, shouldn't designers begin to get with nature who they are?*
   What would you add to this section (if anything)? *Understanding the universality of design is essential to*
   What would you remove (if anything)?

   Design education today (pages 5 - 9)
   ☐ Agree   ☐ Disagree   *Mostly*
   Why? *Somewhat superficial analysis.*
   What would you add to this section (if anything)? *More in depth discussion*
   What would you remove (if anything)? *p. 5 last sentence. Medium needs ~~~~ defined more clearly. Misleading   to be*

Evaluation Form Continued

Foundations programs (pages 10 & 11)

☑ Agree ☐ Disagree → *Mostly*

Why? *Fairly non judgemental analysis*

.What would you add to this section (if anything)?

Role of a foundation program: should include teaching students how to 'see' (it's not a question of what you look at, but what you see)

What would you remove (if anything)?

The role of formalism (pages 13 - 15)

☑ Agree ☐ Disagree

Why?

What would you add to this section (if anything)?

What would you remove (if anything)?

an understanding of the different fields in the visual arts and which field might be most appropriate for the individual student. Or should 18 year olds be forced (or assumed) mature enough to commit to a lifelong pursuit

The role of the computer (pages 17 - 21)

☑ Agree ☐ Disagree

Why?

What would you add to this section (if anything)?

Learning software vs concept & content

What would you remove (if anything)?

The needs of the design student (pages 23 - 27)

☑ Agree ☐ Disagree → *Somewhat*

Why?

What would you add to this section (if anything)?

Design solutions apply to all visual artists

What would you remove (if anything)?

6 Which part of the book was most interesting to you?

Role of computer

☐ none

7 Did examples from colleges and universities contribute to the understanding of the topics? *Could be examples from more universities*

☑ yes ☐ no

8 Do you feel that there were too many, enough or too few points-of-view from different educators and institutions were included in the book?

☐ too many ☑ enough ☑ too few

Evaluation Form Continued

9 Did you learn something new about foundations graphic design education?
☐ yes ☑ no

If yes, what did you learn?

10 Do you think that this book would be useful for new foundations faculty?
☐ yes ☐ no *Depends on the nature of the*

If yes, why? *foundation program*

11 If copies of this book were made available to you, would you recommend them to your peers?
☐ yes ☑ no

A Graphic Design Primer: Resources for Foundations Faculty

Evaluation Form 3

MFA candidate: Sarah B. Tregay (sbt8698@rit.edu)

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Background information

1   What level(s) do you teach?

☑ freshmen   ☐ sophomores   ☐ juniors   ☐ seniors   ☐ continuing education

2   What courses do you teach?

Elements of Graphic Design

3   What is your educational background?

B.A. - Visual Arts   M.F.A- Graphic Design

4   Outside of teaching, what type of artwork or design do you pursue?

Visual Interactive Designer - Kodak.com (webgraphics)   enjoy: drawing, painting... any craft
Previous experience in Bus. to Bus. Marketing / design

Content

5   In reviewing the book, did you agree or disagree with the information presented the following sections? Why?

Defining graphic design (pages 1 & 2)

☑ Agree   ☐ Disagree

Why? *The various definitions provided were helpful in confirming or inspiring a personal definition.*

What would you add to this section (if anything)?

Is there a need to define the areas within design - graphic, industrial etc.

What would you remove (if anything)? *and is this even fair? Maybe not necessary...*

Ø

Art vs, design (page 3)

☑ Agree   ☐ Disagree

Why? *In order to understand "the why" of graphic design one needs to know how.*

What would you add to this section (if anything)?

Is there an influence of art on graphic design.

What would you remove (if anything)?

Ø

Design education today (pages 5 - 9)

☑ Agree   ☐ Disagree

Why?
a.) as communicators, designers really need to understand and be able to think critically about what is going on around them.

What would you add to this section (if anything)?

Info. on what is being done to bridge the gap of students vs. available facult

What would you remove (if anything)?

Ø

Evaluation Form Continued

Foundations programs (pages 10 & 11)

☑ Agree ☐ Disagree

Why?
I agree with the intention of this section which is to further explain the different approaches to teaching design students. and preparing them prior to focusing

What would you add to this section (if anything)? *on the chosen discipline.*

Can you compare other programs to design... like engineering (do they have
~~What would you remove (if anything)?~~ *entro or core classes before entering the major.)*
& others not just serve what I understand Remington's explanation committee.

The role of formalism (pages 13 - 15)

☑ Agree ☐ Disagree   *Great Article ☺*

Why?
→ *Like a sentence it is important to not only   ✗ I am not sure what I understand*
understand how to construct it but what it means.   Rogu's explanation as written, although
What would you add to this section (if anything)?   *I would not remove it but I would like*
I am not sure that I fully understand   to see it explained.
pg. 15.

What would you remove (if anything)?
                    Ø

The role of the computer (pages 17 - 21)   Good Section ★

☑ Agree ☐ Disagree

Why?
A lot of the most innovative design today has resulted from pushing the new medium.

What would you add to this section (if anything)?
Are there any specific examples of how design has "transformed" the computer or has people interact
with and/or use the computer?
What would you remove (if anything)?
                    Ø

The needs of the design student (pages 23 - 27)   Design Brief !' ☺   Berlo's Model ☺
                                                        Great outline of the structure
☑ Agree ☐ Disagree   Very useful tool...

Why?
Great examples and explanation showing
the importance of asking the right question.
What would you add to this section (if anything)?
                    Ø

What would you remove (if anything)?
                    Ø

6 Which part of the book was most interesting to you?
① *The needs of the design student* ② *The role of formalism*
☐ none

7 Did examples from colleges and universities contribute to the understanding of the topics?
☑ yes ☐ no

8 Do you feel that there were too many, enough or too few points-of-view from different educators and
institutions were included in the book?
☐ too many ☑ enough ☐ too few

Evaluation Form Continued

9 Did you learn something new about foundations graphic design education?

☐ yes ☑ no   *although et was enterusting to lee the pros and con's of the 2 approaches you described.*

If yes, what did you learn?

10 Do you think that this book would be useful for new foundations faculty?

☑ yes ☐ no

If yes, why?

It helps put the role of educator into perspective with other disciplines within the College.

11 If copies of this book were made available to you, would you recommend them to your peers?

☑ yes ☐ no

A Graphic Design Primer: Resources for Foundations Faculty

Evaluation Form 4

MFA candidate: Sarah B. Tregay (sbt8698@rit.edu)

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Background information

1   What level(s) do you teach?

☐ freshmen   ☐ sophomores   ☒ juniors   ☒ seniors   ☐ continuing education   ☒ *GRADUATES*

2   What courses do you teach?   *GRADUATE GD DESIGN HISTORY*

3   What is your educational background?   *GRAPHIC DESIGN PRINTMAKING ART HISTORY*

4   Outside of teaching, what type of artwork or design do you pursue?
SCHOLARLY WRITING + RESEARCH SCULPTURE

Content

5   In reviewing the book, did you agree or disagree with the information presented the following sections? Why?

Defining graphic design (pages 1 & 2)

☒ Agree   ☐ Disagree
Why?   *WAS INVOLVED IN thesis PROJECT.*

What would you add to this section (if anything)?

What would you remove (if anything)?

Art vs, design (page 3)

☒ Agree   ☐ Disagree
Why?

What would you add to this section (if anything)?

What would you remove (if anything)?

Design education today (pages 5 -- 9)

☒ Agree   ☐ Disagree
Why?

What would you add to this section (if anything)?

What would you remove (if anything)?

Evaluation Form Continued

Foundations programs (pages 10 & 11)
☒ Agree ☐ Disagree
Why?

What would you add to this section (if anything)?

What would you remove (if anything)?

The role of formalism (pages 13 - 15)
☒ Agree ☐ Disagree
Why?   *CRITICAL + IMPORTANT INFO here*

What would you add to this section (if anything)?

What would you remove (if anything)?

The role of the computer (pages 17 - 21)
☒ Agree ☐ Disagree
Why?

What would you add to this section (if anything)?
INFO FROM DESSA IF WE COULD GET IT
What would you remove (if anything)?

The needs of the design student (pages 23 - 27)
☒ Agree ☐ Disagree
Why?   *A NICE GIVEN TO CONSIDER USER*

What would you add to this section (if anything)?

What would you remove (if anything)?

6   Which part of the book was most interesting to you?
    Formalism
    ☐ none

7   Did examples from colleges and universities contribute to the understanding of the topics?
    ☒ yes ☐ no

8   Do you feel that there were too many, enough or too few points-of-view from different educators and institutions were included in the book?
    ☐ too many ☒ enough ☐ too few

Evaluation Form Continued

9 Did you learn something new about foundations graphic design education?
☐ yes ☒ no

If yes, what did you learn?

10 Do you think that this book would be useful for new foundations faculty?
☒ yes ☐ no

If yes, why?

11 If copies of this book were made available to you, would you recommend them to your peers?
☒ yes ☐ no

Good questionare !

A Graphic Design Primer: Resources for Foundations Faculty Evaluation Form 5

MFA candidate: Sarah B. Tregay (sbt8698@rit.edu)

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Background information

1 What level(s) do you teach?
☑ freshmen   ☐ sophomores   ☐ juniors   ☐ seniors   ☐ continuing education

2 What courses do you teach?

3 What is your educational background?

4 Outside of teaching, what type of artwork or design do you pursue?

Content

5 In reviewing the book, did you agree or disagree with the information presented the following sections? Why?

Defining graphic design (pages 1 & 2)
☐ Agree   ☐ Disagree
Why?

What would you add to this section (if anything)?

What would you remove (if anything)?

Art vs, design (page 3)
☐ Agree   ☐ Disagree
Why?

What would you add to this section (if anything)?

What would you remove (if anything)?

Design education today (pages 5 - 9)
☐ Agree   ☐ Disagree
Why?

What would you add to this section (if anything)?

What would you remove (if anything)?

Evaluation Form Continued

Foundations programs (pages 10 & 11)
☐ Agree ☐ Disagree
Why?

What would you add to this section (if anything)?

What would you remove (if anything)?

The role of formalism (pages 13 - 15)
☐ Agree ☐ Disagree
Why? "Content" is Key

What would you add to this section (if anything)?

What would you remove (if anything)?

The role of the computer (pages 17 - 21)
☐ Agree ☒ Disagree
Why? most ed have
taken place in debate

What would you add to this section (if anything)?
(add alternatives that is 2c)/

What would you remove (if anything)?

The needs of the design student (pages 23 - 27)
☐ Agree ☐ Disagree
Why?

What would you add to this section (if anything)?

What would you remove (if anything)?

6   Which part of the book was most interesting to you?

☐ none

7   Did examples from colleges and universities contribute to the understanding of the topics?
☐ yes ☐ no   Too many not enough in-depth

8   Do you feel that there were too many, enough or too few points-of-view from different educators and institutions were included in the book?
☒ too many ☐ enough ☐ too few

Evaluation Form Continued

9 Did you learn something new about foundations graphic design education?
☐ yes ☒ no

If yes, what did you learn?

10 Do you think that this book would be useful for new foundations faculty?
☐ yes ☐ no

If yes, why?

11 If copies of this book were made available to you, would you recommend them to your peers?
☐ yes ☐ no

6.

Background information

1   What level(s) do you teach?

Freshman and transfer students

2   What courses do you teach?

Two – Dimensional Design and Foundation Drawing

3   What is your educational background?

BFA University of Massachusetts, Amherst, 1981

MFA Indiana State University, Terre Haute, 1983

4   Outside of teaching, what type of artwork or design do you pursue?

Drawings, paintings and prints

Content

5   In reviewing the book, did you agree or disagree with the information presented the following sections? Why?

Defining graphic design (pages 1&2)

My only issue is with the sense that the use of the term graphic design is backward rather than forward looking.

Art vs. design (page 3)

The differentiation of fine arts from graphic design as being centered on client - initiated content seems naive. All art work, if it functions successfully within the context of the larger art world will be client centered, be it by patrons, gallery directors, museum curators or critics.

The implication, if only by omission, that only the fine arts are defined by social, political, economic and cultural contexts begs the question of context in reference to graphic design. How do aesthetic, formal and philosophical transformations and innovations occur within the field of graphic design?!

Design education today (pages 5 – 9)

I agree with the concept of broadening out the educational options and platform from which designers will operate. I disagree with the notion that aspects of traditional education can easily be substituted for broader, liberal arts based courses without any critical loss of skill or formal knowledge. The number of projects cannot assess skill level (e.g. drafting). Time is a critical factor in the educational process.

Foundations programs (pages 10 &11)

The repetition of formal aesthetic principles during the first semester of sophomore year, Demonstrates that:

> 1. There is a 40% loss of retention over the summer at all educational levels, that creates the need for reinforcement and the revisiting of previously covered information.

> 2. That the understanding and knowledge of the broad based and interactive Curriculum covered in the first year is lacking on the part of those teaching the Sophomore curriculum.

What is a "visually busy" way of working?! You cannot have diversity and directed focus simultaneously (see Design education today).

40% of incoming freshman at RIT who declare their major to be Graphic Design will change their minds at the end of the first year. Choice is by far the better opportunity to explore the design major in the first year because it is a student centered approach, which focuses on the needs and desires of students to explore their educational environment.

The foundations department, prior to the enrollment of photography students into our programs, has historically had a 92% retention rate, one of the highest in the Institution. Isolation does not appear to be a critical factor in freshman education.

The proof of the success of this new programming at RIT has yet to be established and it is premature to suggest that it will enhance the success of the program. Retention and graduate career outcomes need to be assessed in relationship to these changes.

The role of formalism (pages 13 – 15)
The definitions of formalism seem static and time based. How does transition and innovation occur relative to the use of formalism within a graphic design education?

The role of the computer (pages 17 – 21)
I agree

The needs of the design students (pages 23 – 27)
I agree

6 Which part of the book was most interesting to you?

I really enjoyed the quotes. The diversity of information, opinions and approaches was Fascinating.

7 Did examples from colleges and universities contribute to the understanding of the topics?

Definitely

8 Do you feel that there were too many, enough or too few points-of-view from different educators and institutions were included in the book?

Enough

9 Did you learn something new about foundations graphic design education?

I feel that the portion of the book on foundation education was the most biased. I feel that assumptions were made about the success of changes in programming without the necessary documentation of the outcomes of such changes (retention rates, graduate success, etc.)

10 Do you think that this book would be useful for new foundation faculty?

The answer to this question is dependent upon the nature of the foundations program into which a new faculty member is entering.

11 If copies of this book were made available to you, would you recommend them to your Peers?

I found the diversity of opinion and broad spectrum of approaches fascinating, but I am committed to a broad based and diversified foundation curriculum that expands rather than narrows visual, conceptual, philosophical and vocational focus. I am not aligned philosophically with your recommendations for a foundation education for graphic designers.

Evaluation Response
to Primer

April 26, 2000

Re: response/assessment to <u>A Graphic Design Primer</u>, by Sarah B. Tregay

Dear Sarah,
I'd like to open with the fact that a primer for Foundations faculty is a good idea.

Questionnaire -
1) Teach: freshmen
2) Teaching: Three-dimensional Design.
   Have taught: 2-D Design, Creative Sources, Craft Design, Freshman Seminar, Seminar for Teaching Assistants, Forms of Inquiry, and the History of Architecture, Interiors, and Furniture.
3)
- Master of Arts - Design Studio
      Northern Illinois University, DeKalb, IL; 8/76.
- Bachelor of Science - Studio Art with a minor in Industrial Arts,
      Murray State University, Murray, KY; 5/72.

4) I am accepted as one of the significant innovators in the field of contemporary woodturning:
- Mentor Award: Recognized by the American Association of Woodturners as one of 15 individuals who have had the greatest impact on the field of woodturning, via their work and the sharing of their expertise, during the first ten years of the organization; 6/96.
- "Steve Loar is probably the best example of an orchestrator in the woodworking field today...." ;WOODWORK, 2/99.

Content -
5)
Defining GD – Agree, generally.
- The definition for design clearly includes products of 2-D endeavors, but only allows "a model or a sketch" as a possible reference to 3-D endeavors.
- I am quite partial to "communication design" – a concept apparently lost to much of contemporary graphic design as it has pursued deconstruction and fashion.

Art vs Design - Disagree.
- "Fine Artists" is vague; "painter" – maybe, but as a individual grounded in craft and partial to illustration, the whole business of an artist dealing only with the "internal" is at the crux of the problem. Without consideration for communication or dialog with the viewer, or an interest in using an understandable vocabulary, Art has been left to insult and degrade, rather than communicate, or heaven forbid, to pursue beauty and intrigue.
- The Pratt quote is bullshit, grounded in 20th century Art theory.

Design Education - Agree.
- I do not understand the Buchanan quote – " ...a new liberal art of technological culture". With the Sanders quote making more sense. If RIT is interested in this, though, they (we) better engage our students at deeper levels of critical thinking and creative problem solving, in addition to our emphasis on training for technique.
- The Ockerse quote should be in headlines, and implanted in faculty and administrations' heads. We do not presently educate at RIT, we train (Swanson quote). Education would endanger enrollment, retention, and the bottom line. Rob Roy Kelly's quote epitomizes the problem – and it is in clear opposition to most of your other quotes.
- "True education makes for inequality: the inequality of the individual, the inequality of success; the glorious inequality of talent, of genius. For inequality - not mediocrity, individual superiority – not standardization, is the measure of progress of the world."
  - Felix Schelling
- Do you (or the GD field) need to address the reality that "word processing" has put much of what was formerly GD into the hands of the consumer, hobbyist, and dilettante? To paraphrase an old song, "Graphic Design - What is it good for?". Patti LaChance puts forth a sound argument, but I don't think that the public has heard it or understands it. We're in an age that may make Victorian design look pretty rational. This is where Candice Sanders quote really starts to stand out as a major item (page 6) and Vrontikis' quote (page 8) describes the problem well.

Foundation programs –
- What planet was Rob Roy Kelly raised on?
- Paragraphs #3 on page 10 and on page 11 – these deserves a great deal more space and discussion. Or maybe I am looking at it from the wrong side of the lens, and the real discussion of this topic needs to be in <u>A Foundations Primer: Resources for Upper Division Faculty</u>?
- There is apparently little understanding of the nature of the incoming freshman and the scope of the resulting education curve. I have increasingly wondered if a noble cause would be to deliver to the sophomore major an individual who "simply" believes that they are in the right place, doing the right thing, based on the fact Foundation imbued in them a love of designing and making things.
- Two things: 1) Yes, Foundations has for too long looked at its mission as one of preparing students or *anything*, vs our major programs. This has been a major error., and 2) RIT Graphic Design is in for a major surprise in September of 2000, when they have to address the reality of a 65% forgetting rate over the summer, and they have to repeat and retread what they presented in Elements of graphic Design.
- As much as I love teaching freshmen, it gets tiresome being the perpetual Drill Sargent who trains and disciplines their fresh recruits and then sends them off to a "war", never to know how they did, or if what they learned form you made a difference.

The Role of Formalism –
- This is where I started to feel really dumb – and I'm not.
- An attitude of our Foundations program that has never been articulated or discussed, is that we are not to do "applied "problems. This leaves us with formalism only, which Mentzer says is a dead end, and someone else says is impossible to sustain for more than an introductory moment. We have to do it for nine months.
- The failure of Foundations and the upper division to converse and to create a Foundations curriculum that is truly relevant to our programs, is most glaring in this area. Foundations acts like it is a holy virgin, not to be violated by anyone, and the upper divisions have tended to either ignore the problem, fume about it, or apply a big hammer (i.e. Elements of Design) as a remedy. Never has there been negotiate collegial discussion and followed by full blown curriculum development.
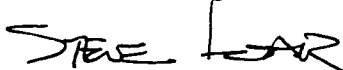
The role of the computer –
- Here again, we train, we do not educate.
- Rand's quote (all of them) – page 19 is superb. Jim Ver Hague once told me that Foundations should just throw away all of the scissors, blades,

The role of the computer –
- Here again, we train, we do not educate.
- Rand's quote (all of them) – page 19 is superb. Jim Ver Hague once told me that Foundations should just throw away all of the scissors, blades, rubber cement, - the works – and put the students on computers the first day; it was the future. With this disparity of thinking within the program, a whole lot of discussion is needed.
- A favorite statement form my administrative days is, "To say that the computer is just a tool, is like saying the automobile is simple a mode of transportation, or that television is simply entertainment. They have all fundamentally changed the fabric of our daily lives as well as the core values of our society."

The needs of the design student –
- There isn't a yes/no to this one. Without a engaging and convincing vision of the problem and future of the program fields, a plan that all levels of the teaching buys into , and one that they are then knowledgeable of, the needs of the students will be addressed helter – skelter and idiosyncratically by the various instructors.

6)
- The part before I felt dumb. It should have been page 13 and beyond, but being in a no-content Foundation program of formalism, I was most interested in 3-12.
- If anyone wants the content of page 3 taught to the freshmen, they better invest some time with the Foundation faculty.

7)
- It made it clear that there are great divides in the field and in the teaching of it.

8)
- The "many" made for a lack of direction – probably indicative of our school. Your book seems to want to get a specific point across (ie p. 3) but it is ultimately diluted by the many crossing opinions.
- I am no clearer on what I should teach or instill after reading and studying the guide, than before. In that way, the experience has been fairly depressing.
- The exercise shines a glaring light on what we are **not**.

Thank you for considering my opinions.
Sincerely,

Steve Loar, Associate Professor, Foundations
716-786-5864 or sclfaa@rit,edu
(please do not use my office phone)

A Graphic Design Primer
Resources for Educators

Please note that the actual size is 7.5 by 11 inches.
A line in the outside margin indicates the trimmed area.

A Graphic Design Primer

Resources for Educators

Sarah B. Tregay

A Graphic Design Primer

Resources for Educators

Sarah B. Tregay

Table of contents

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Thank you Professor Eileen Bushnell and her
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classes to revisit freshmen year at RIT.

And for the valuable assistance in editing,
thank you Maggie Everhart.

Introduction

This is a primer—a small introductory book—
on graphic design education with a focus on
the first year, or foundations. It can be viewed
as a toolbox or 'help menu' for new foundations
faculty, upper-division professors and graduate
teaching assistants. It can also be seen as the
beginning of a conversation—open-ended,
yet able to stimulate thinking about how and
why we teach.

The goal of this primer is to provide an
accessible collection of resources and insights
from professional educators to new faculty,
whether they are from a fine arts or a design
background. For example, fine artists teach inte-
grated foundations courses that are comprised of
students majoring in the arts, crafts and design.
The primer will provide fine artists with an under-
standing of the field of graphic design so that
they can better address the fundamental needs
of the design students. Another example is the
practicing graphic designer who returns to
academia: this new faculty member would feel
at home teaching upper-level students to design
corporate identities, collateral and/or multimedia.
Yet, if faced with a foundations 2-D design
course, they can refer to the primer for a
review of formalism.

This Primer may assist upper-division faculty
members with grasping the concepts taught
freshman year so that they can reinforce
learning in their classes. Revisiting concepts and
making connections is an important part of a
quality graphic design education.
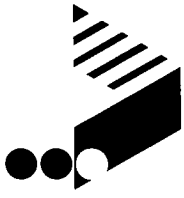
Defining graphic design

There are an endless number of definitions for the word design. Adding to the complexity is that design can be both a noun (a design) and a verb (to design). It is the verb that is so talked about.

To get started, design (the verb) is a human activity rooted in intention: to conceive, to invent, to form a plan. The result of the activity is a design: a visual composition, an intellectual property, an object or environment, a model or a sketch.[1] Design is commonly divided into specialties including, but not limited to, interior design, industrial design and graphic design.

Defining graphic design is equally complex. Yet understanding what it is and what it can be is essential for students. The field has traditionally included typography, corporate identities, publications, printed materials and advertising, but it has expanded to include communication through film, broadcast and computer-based media.[2] The fields of exhibit design and environmental graphic design address three-dimensional spaces and experiences. Formats and media may vary, but graphic design is the shaping of a message, information or idea. For the most part, it is meant to be seen and read by an audience. Graphic design serves to convey a message to the viewer.

Throughout this book, the term graphic design will be employed. There is a movement to replace the term with "visual design," "interaction design," "visual communication" and/or "communication design." These terms speak to the essence of the changing field, which is to communicate. Yet the author has made a conscious decision to use graphic design because it is common to many, frequently describing departments and programs at universities and designating the work of professionals.

Anybody who has been confronted with design education would readily admit that proposing a satisfactory definition of design is a rather risky, if not impossible, enterprise. Its definition indeed depends on whether design is considered to be an idea, a knowledge, a project, a process, a product, or even a way-of-being.
Alain Findeli

Design is the conscious and intuitive effort to impose meaningful order.
Victor Papenek

Everyone designs who devises courses of action aimed at changing existing situations into preferred ones.
Herbert A. Simon

Graphic design is the activity that organizes visual communication in society.
Jorge Frascara

Visual communication of any kind... should be seen as the embodiment of form and function: the integration of the beautiful and the useful.
Paul Rand

Art and Design

Although the end products of fine art and design may differ, both communicate to an audience through a visual experience. Fine artists, such as painters and sculptors, and designers share social, economic and political surroundings. Both work with the same visual forms—lines, planes, volumes, spaces, textures and colors. Artists and designers take time to understand work that has preceded them, as well as to observe current and upcoming trends. The difference between the two is that an artist solves his or her own problems and a designer solves other people's problems.

The artist initiates the concept and content of his or her own work in relation to the larger art world, patrons, curators and critics. The content and form often come from the artist's own experiences, interests or pursuits, in his or her own voice. Susan E. McKenna of the University of Massachusetts, Amherst encourages "students to consider how every image they make is a self-portrait."[3] In addition to an artist-initiated concept, artwork can have meaning that is culturally situated because it is tied to social, political, and economic contexts that surround both the artist and viewer. The contemporary artist addresses these concerns in order to communicate with the viewer.

The graphic designer works with client-initiated content. Clients may be organizations, companies or individuals, each with a message to send to a particular audience.[4] The designer is the mediator who conveys the client's content—words and information—in a manner that suits the project and his or her own visual sensibilities.

Understanding the nature of design is essential for first year students majoring in graphic design. This understanding will better prepare them for sophomore year when students will focus on beginning to build messages that are creative, yet cohesive and clear.

Design is a very different kind of activity from painting, sculpture, or crafts, even though there are points of contact between those areas.
Alvin Lustig

Rather than just avoiding what has been done by other artists, what makes a piece of art unique is the candidly expressed response to life that comes from the center of the individual.
Virginia Huber

I am going to put "design" in quotes because I am not sure I am in a position to define it as separate from art. I don't want to see it become separated.
Roberley Bell
Rochester Institute of Technology

Design is external, in that its forms and application extend basic human functions and needs... Art is internal, in that its forms affect the senses and thereby influence the psyche, the emotions, the spirit.
William Newkirk

At best the designer is an objective mediator who assists in the process of fulfilling the objectives and needs of others.
Thomas Ockerse
Rhode Island School of Design

Designers have to work with somebody else's content, words that someone else has come up with and a message they have come up with. This is what design is. And this is what makes it different from fine art.
Michael Bierut

Design education today

Design education is in a state of transition because design itself is changing. Graphic design has extended beyond the printed page in every direction. New domains are cropping up everywhere: human-computer interaction, strategic planning and new forms of media. Designers collaborate with other professionals from the sciences, the liberal arts, business and technology. Design students are being taught how to think, communicate and solve problems in any medium, ranging from museum exhibits, to books, to the internet.
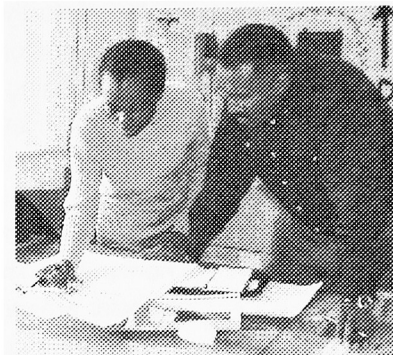
Eric Anderson and a student work on a diagram layout at Carnegie Mellon University.

What is the state of design education in the US today? I think it is definitely in a state of transition and in some instances, it is in dire straits. Some schools are in this state of transition and other schools are coming to the crossroads and scared as the dickens not knowing which way to go.
Dan Boyarski
Carnegie Mellon University

The state of design education is very healthy. It has moved from an art tradition to embrace the sciences, language and architecture. Boundaries are merging.
Mark Mentzer
Carnegie Mellon University

It depends on where you go. It ranges from wonderful to horrible.
Dennis Rexroad
Virginia Commonwealth University

Graphic design used to solve communication challenges. Now, because of the convergence of technology, commerce, and design, communication challenges have to be solved in the context of larger, more global challenges.
Clement Mok

Design should be about meaning and how meaning can be created. Design should be about the relationship of form and communication. It is one of those fields where sciences and literature meet. It can shine a light on hidden corners of sociology and history.
Gunnar Swanson

Educators agree that design education today needs to be higher education and not vocational training. The outcomes of an education are neither predictable nor concrete whereas the end result of training is a list of tasks that a person can complete. Simply training students how to use the computer is doing them a disservice because it is not preparing them for making formal aesthetic judgements, thinking critically, or solving problems. These skills sepa-rate graphic designers from desktop publishers.

Education is about asking questions and answering them. Students should develop a way of thinking and solving problems. It is making informed decisions based on a broad spectrum of information: formal language, cultural interpre-tations, political, social and economic issues.[6] The liberal arts are an important component of a design education.

Education is training how to think.
Dennis Rexroad

...I suggest that we not only increase the augmentation of design education with more liberal arts studies, but also reconsider graphic design education—as a liberal arts subject.
Gunnar Swanson

A liberal arts education is an excellent basis for a design education, for it broadens the student's perception of the world and develops the ability to think strategically.
Thomas Ockerse

The tools of graphic design do not seem to serve much purpose beyond a graphic design career. Graphic design education is not, for the most part, education. It is vocational training, and a rather narrow, specialized training at that.
Gunnar Swanson

You can't teach both graphic design and the philosophy of life. A narrowly focused graphic design eduction is needed.
Rob Roy Kelly
Arizona State University

***Training* is concerned with preparing the student for specific tasks: the known. But *education* concerns itself with preparing for the future: the unknown.**
Thomas Ockerse

Two factors in assessing the quality of design education today are the multitude of programs and the shortage of qualified faculty.

Design education is taking place in a diverse collection of schools. There are approximately 240 undergraduate programs in graphic design and up to 2,500 community colleges and junior colleges with existing programs and new programs being developed each year.[8] Programs vary in quality, name, length, purpose and results. The National Association of Schools of Art and Design (NASAD) states that four-year professional degree programs that meet their standards prepare students for entry-level positions in the graphic design field. These programs offer degrees such as Bachelor of Fine Arts in Graphic Design or Bachelor of Graphic Design.[9] The programs that NASAD does not recognize as "adequate preparation for entry as a graphic design professional"[10] are those with less than a major in graphic design, graphic design within four-year liberal art programs and two year programs. These programs have a different purpose: they prepare students for later design study or train them for technical support positions.

Due to large numbers enrolling in these programs and a healthy economy, there is a shortage of qualified faculty. Faculty may not be qualified to teach graphic design for several reasons. Individuals with great technical ability may not have a formal design background. Recent MFA graduates must practice professionally, in addition to teaching, in order to develop professionally. Fine arts faculty are often qualified to teach classes in foundations, photography, illustration, and calligraphy but are "generally not qualified to bring students to competence with the range of issues identified in the NASAD standards."[11] Part-time, or adjunct faculty can bring qualified expertise to the classroom, but they may not be able to get away from their studios in times of economic boom. Because adjuncts are not compensated for participating in curricular development, a sufficient number of full-time faculty will provide long-term stability to the program.[12]

A graphic design program is only as good as its faculty.
Rob Roy Kelly

And while the country's serious graphic design departments admit only the best students and fully prepare them for professional practice, many other organizations set up programs in graphic design as cash cows to support other departments.
Ed Gold

If I were to hire a teacher, I'd hire one from the program with the strongest structure. They have a sound pedagogical base, a good vocabulary and sense of sequence. Self-taught designers are not good teachers for the first two years of study because they don't know how they got there.
Rob Roy Kelly

9

At some schools, the goals of the foundations program are driven toward the design disciplines. These first-year programs are often "in-house" ventures, organized from within the design school. Some take place in institutions that do not have majors in the fine arts or the crafts. Design-only programs can include graphic, industrial, interior and architectural designers.

The benefits of these programs include students' being able to focus on formal aesthetics, message-making and issues central to design. This focus can be found both in the studios and in seminars. At Carnegie Mellon University, for example, seminar courses introduce students to conceptual issues in design. The first year is both exciting and relevant to the design student.[19]

On the other hand, students in these foundations programs may be isolated from other students. At CMU, faculty make efforts to schedule time for freshmen to interact with upperclassmen.[20]

With a narrower focus, design-only foundations programs must avoid having a narrow vision of the world and avoid simply training the student.

In the 1999-2000 school year, RIT's School of Design implemented a new curriculum. For the first two quarters, graphic design students enroll in 2-D and 3-D studio courses with art, photography, craft and interior and industrial design students. In the third quarter, they take an introductory course in the elements of graphic design, a course originally taught to sophomores. This combination moves the graphic design major forward into the students' first year experience. It is much too soon to know if this change will impact student retention, graduation or professional practice.

A good design fundamentals curriculum will integrate students from a variety of design programs, such as graphic, industrial, and architectural, and will teach them the fundamental processes of design using sound teaching methods.
Lauren McDermott
Arizona State University
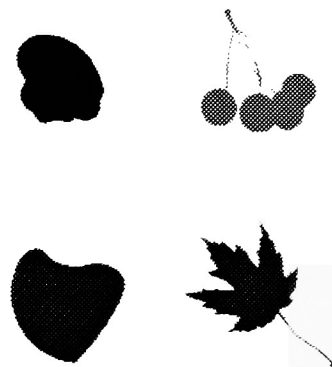
RIT student work from one of Bruce Meader's classes based on Rob Roy Kelly's shape/form projects. The first shape is abstract. Its goal is to produce the illusion of dimension. The second shape conveys information about a specific object.

Although additional research is still needed, it is possible that exposure to graphic design may help students bridge the gap as they move into their major sophomore year. It may also assist in helping an undecided student choose a major.

In a small study, fifteen design students, representing nine different first-year programs, were asked about the most important thing that they learned freshman year. Five students felt that an introduction to graphic design and/or the other majors is important for informed decision making about their major. Two students said that "I didn't really know what graphic design was"[21] and "I had no idea what Graphic Design really was until sophomore year."[22]

Another factor that the author believes is key to a successful design education is reinforcing learning from one year to the next. When upper-level design faculty understand the integrated foundations program, information presented freshman year can be easily reinforced during sophomore year.

Graphic design education is a combination of many subjects, but the first of those is the study of graphic design... and this is why it is important to carefully define and present the basic knowledge of the field. That is not to say that other subjects are not important in the education of a graphic designer. Far from it. Our core knowledge rests within a larger context of design in general, and is surrounded by the study of art, literature, history, other humanities and social sciences, and the natural sciences as well. Geoffry Fried and Douglass Scott

A good education is one that gives you the resourcefulness to solve the problems you haven't anticipated. It should provide experiences that give you the ability to express yourself in a variety of media. Chris Pullman

The role of formalism

Anthony Mann describes formalism well: "A visual formalism is a set of rules, methods, and practices, which together define a visual form acceptable to a group of people."[23]

Formalism—the grammar of design—is best understood by the design student when it is used in combination with content. One could go as far as to think of form and content as inseparable. As Paul Rand described, "Content is the raw material of design. Form, in turn, is the reorganization of and manipulation of content."[24]

When form and content are divorced, visual elements exist for beauty alone without a message to convey and an audience to convey it to, therefore straying away from the essence and purpose of graphic design.

Professor R. Roger Remington of Rochester Institute of Technology cautions against confusing form *plus* content as not having formal qualities. When form and content are combined, the composition should not stray away from formalism, but should be built from a strong formal structure.[25]
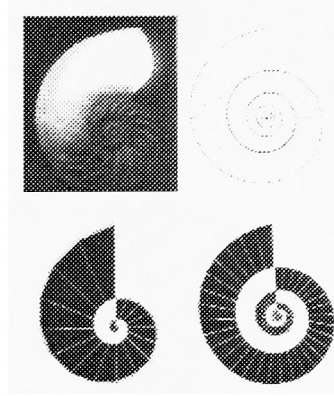
Student work from Hochschule Anhalt, Dessau, Germany
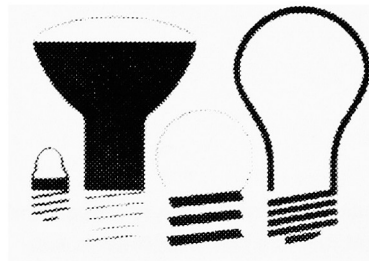
Student work from RIT

Design is the fusion of form and content, the realization and unique expression of an idea.
Paul Rand

Basic graphic design education should cover subjects relating to perception, concept and method, with particular emphasis on the relationships among these three things.
Geoffry Fried and Douglass Scott

Line, plane, surface, color, material, space and time should be presented to students as a coherent whole.
Armin Hofmann

15

The author chooses to define formalism as: a tendency, largely influenced by modernism, to observe the grammar of design which includes the structure and relationships of elements in a composition and formal aesthetic principles. These include, but are not limited to, balance, contrast, repetition, rhythm, figure/ground, and harmony. Because formal aesthetic principles are relevant to the visual world, their scope is extendible rather than finite.

Below are three authors' views of formalism:

Bob Lloyd
Formalism consists of 3 fundamental concepts:
1 a notion of order
2 clarity of form and space
3 significant contrast[26]

Symbols developed by RIT students

Anthony Mann
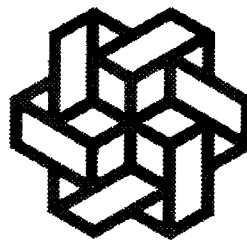Four methods of layout (the basis of new formalism), each requires skill and discrimination:
1 Free intuitive arrangements
2 Balanced arrangements about an implied axis
3 Edge alignments with multiple axis
4 Positioning related to the edge of the page[27]

Paul Rand
Design judgements are based on two kinds of values:
1 associative (extrinsic)
2 formal (intrinsic)[28]
Good design is not based on nostalgia or trendiness. Intrinsic quality is the only real measure of good design.

Education addresses fundamental areas of preparation: the understanding and use of the elements of visual form and syntax; the potential for the expression of meaning through visual form; the synthesis of form and meaning in the boundaries of time, format...
Kenneth Hiebert
University of the Arts

If we cannot teach intuitive design successfully, we must agree upon a formalism which can be taught, then train not only the designers...
Anthony Mann

The role of the computer

The computer as a medium

Educators today no longer debate about
the computer being just another tool because
educators and design practitioners agree that the
computer can be a means for executing ideas
(a tool) and a medium for communicating ideas
(an interactive environment).

New media can be used to integrate time,
motion, sound, and interaction into a cohesive
design. Design students and teachers can add
time, motion, sound, and interaction to their
toolbox of visual and physical attributes of form
which already has in it color, value, texture,
shape and proportion. These skills are not com-
pletely new to the designer. The time it takes to
turn a page in a book is often considered as
much a part of the design as is the interaction of
the audience with the content of an exhibit. Yet
the skills can be used in new, exciting ways due
to the computer's coming of age as an integral
part of our culture.
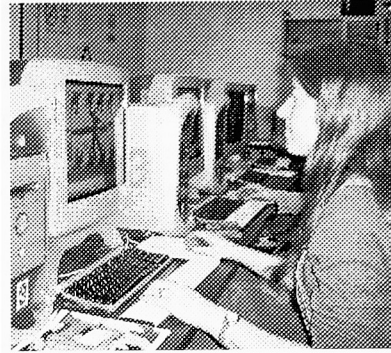
An RIT student combines images
that were taken by herself and her
classmates into a composition.

**I say to them, 'No it is not a tool.'
It has fundamentally changed
the way we do things, it's changed
the way we think about things,
and it's changed our values.**
Leslie Becker
California College of Arts & Crafts

**Some people see it [the computer]
as another tool, another t-square,
another paste-up table and so on.
But they fail to realize that it is a
medium in itself and what you are
designing isn't going to leave the
screen; it has a life on the screen
and only on the screen.**
Dan Boyarski

**For designers, the computer is, in
effect, the canvas of the twenty-
first century. It touches everything
we do.**
Jessica Helfand

**To say that the computer is
just a tool is like saying the
automobile is simply a mode of
transportation, or that television is
simply entertainment. They have
all fundamentally changed the
fabric of our daily lives as well as
the core values of our society.**
Unknown

19

The computer as a tool

Ever since the Macintosh first entered the classroom, students have had to unlearn the notion that if 'it was done on the computer, it is therefore designed.'[29] Communicating to students about the role of the computer is essential. "They need to see it in the proper light... a blending of concept and realization: thinking and making" Mark Mentzer explains.[30] The form and content of a design is paramount over the tool used to put the parts together. Students should generate ideas and work through a design by hand before moving to the computer because nothing can replace sketching.

In a typography class, using a computer to compose type saves time. Students can learn software as they are introduced to linespacing, justification, format, point sizes and column widths. The computer, as a tool, is beneficial because these details cannot be easily under-stood with sketches alone and hot-metal typesetting is a slow process, not to mention an archaic though wonderful technology that is almost completely gone.[31]

When to use computers is certainly as important as how to use them. In the school environment, they should be part of the curriculum but not the curriculum: nothing can replace the hand in the early stages of design education.
Paul Rand

...as computer programs get more elaborate and all kinds of manipulation become easily available, confusion among basic form, transformations and stylistic mannerisms grows.

Consequently work on the computer tends to be excessively colored by what the programs allow one to do versus what is actually appropriate to content...
Kenneth Hiebert

It's just not practical anymore to teach design without addressing advances in technology. At the same time you don't want to focus on technology and software, because in another five years the current technology will be history.
Geoffry Fried

RIT students also find the computer useful in research; CD-Roms, internet resources and databases from libraries in other cities may be accessed via computer. In order to understand the content of a design problem, research is required. Professors stress that research should come from a variety of sources, including library books, journals and reliable internet resources.

Hand Skills

The computer is essential to practicing designers. Yet, much of learning about design is done away from the computer. So much can be gained through the process of sketching, drawing and model-making that the computer should never get in the way of the hand and eye of the designer. "The computer is just there. We take it for granted. It isn't special anymore. What is special," explains Dennis Rexroad, Director of the Art Foundation Program at Virginia Commonwealth University, "is hand skills."[33]
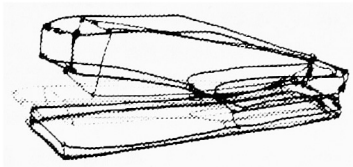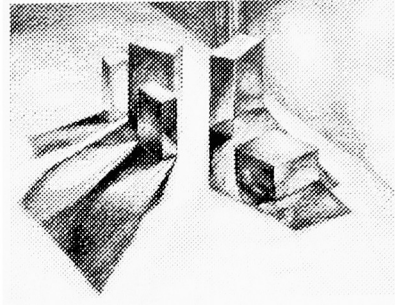
Hand-generated pencil perspective drawing and wire-frame model by an RIT student.
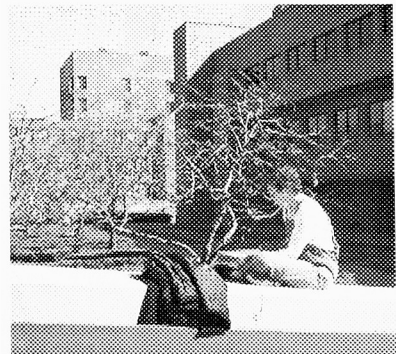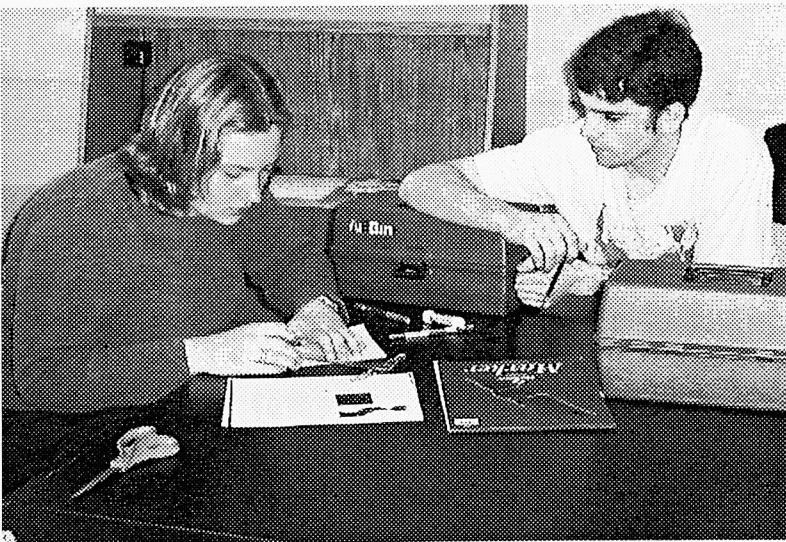
Above: a student working on a perspective drawing on the RIT campus.
Right: freshmen graphic design students work with geometric shapes in cut-paper.

The needs of the design student

When asked what design students learned at the Hochschule Anhalt in Dessau, Germany, Professor Kurt Mehnert replied that he teaches students to ask and answer the questions who? why? what? and how?[34] Dan Boyarski, a professor at Carnegie Mellon University, had the same answer in Pittsburgh, Pennsylvania: "Who is this for? Why will it be used? How will it be used? When will it be used? In other words, really understanding the client needs and audience intent before giving form to that artifact."[35]

Designers and visual artists are problem solvers. In order to successfully resolve design challenges, students need to learn how to use tools like the semiotic theory, seen on page 2. Semiotics, the study and application of how meaning is created through signs and symbols, will help students build visual messages with meaning and take apart existing ones. Semiotic theory includes how signs function, carry a message, and serve or impact people.[36]

The **semantic** (concept/meaning) questions refer to the relationship of the visual design (or sign) to the meaning.
    What message?
    Why?
    For whom? (audience or user)
    What context?

The **syntactic** (formal/aesthetic) dimension relates to the relationship of one visual element (or sign) to another visual element (or sign).
    What form?

Pragmatic (functional/technical) questions refer to the relationship that is formed between the visual design (or sign) and the viewer or user.[37]
    How?

To become a designer, one must learn both to think and perform like a designer.
Lauren McDermott

Design is idea-driven. Why? How? What form? What technology or tool to deliver the message?
Mark Mentzer

The structure of a design brief

The design brief specifies the nature or essence of the problem in an overview paragraph. In the expanded text, the brief identifies the so called "who, what, where, when, why and how's" of the project. The aim of the text is to inform the client of facts and principles.

The design brief checklist

title and subtitle
team participants
project client
project audience
project theme
project context
the design process
goals and objectives (project expectations)
    for the client's needs, motives and interests
    for design strategy
    for end results, use, function or purpose
project type or format of the finished design
project tasks
project requirements
project schedule
budget and other constraints

The structure of a visual message

In a presentation at the AIGA San Diego Y Design Conference, Katherine McCoy, senior lecturer at Illinois Institute of Technology's Institute of Design, noted that new technologies are changing society. Technologies, such as the internet and on-demand digital printing, allow for the targeting of messages to subcultures. This can be thought of as "narrowcasting" to a specific subculture as opposed to broadcasting to a large community. Due to technology, communications today are often audience-centered, and in some cases, the user determines the final experience. An example would be an interactive web site where the user directs the content of the design.[38] Graphic design students can begin to learn about the structure of visual message-making by using Shannon and Weaver's model of human communication.[39]

The model has four significant parts:
The **source** (sender or encoder) is the client/designer team that creates the visual message.

The **message** is the idea that is communicated to others.

The **channel** is the mode which carries the message. The channel may be one of the senses: sight, touch, and hearing that are affected by the media print, film, radio, or internet.

The **receiver** (decoder) of the message is the audience or user.[40]

A convenient way to describe an act of communication is to answer the following questions:
 Who?
 Says what?
 In which channel?
 To whom?
 With what effect?
Harold D. Lasswell

Source ⟶	encodes ⟶	Message	Channel ⟶	decodes ⟶	Receiver
client	organizes	idea/concept	sight	reads	communities
designer	writes	form	touch	watches	subcultures
	designs	format	hearing	listens	individuals
		context	final media	interacts	
				understands	

Good reading

Aesthetic principles	Amy E. Arntson **Graphic Design Basics**
	+ Malcolm Grear **Inside/Outside**
	Armin Hofmann **Graphic Design Manual**
	Linda Holtzschue and Edward Noriega **Design Fundamentals of the Digital Age**
	Johannes Itten **Design and Form**
	Wassily Kandinsky **Point and Line to Plane**
	Paul Klee **Paul Klee's Pedagogical Sketchbook**
	Paul Klee, Juerg Spiller (editor) **Paul Klee—The Thinking Eye, vol. 1**
	Paul Klee, Juerg Spiller (editor) **Paul Klee—Notebooks, vol. 2**
	David A. Lauer and Stephen Pentak **Design Basics**
	Manfred Maier **Basic Principles of Design**
	Scott McCloud **Understanding Comics**
	+ Wallschlaeger and Busic-Snyder **Basic Visual Concepts and Principles**

Color	+ Josef Albers **Interaction of Color**
	Leatrice Eiseman **Pantone Guide to Communicating with Color**
	Frans Gerritsen **Theory And Practice Of Color**
	Karl Gerstner **The Forms Of Color**
	Karl Gerstner **The Spirit Of Color**
	Johannes Itten **The Art of Color**
	Johannes Itten **Elements of Color**
	Richard Zakia **Color Primer 1 and 2**

Drawing	Claudia Betti and Teel Sale **Drawing: A Contemporary Approach**
	Frank Ching, et al **Design Drawing**
	John Montague **Basic Perspective Drawing: A Visual Approach, 3rd Edition**

Education	Benjamin S. Bloom (editor) **Taxonomy of Educational Objectives: Handbook 1, Cognitive Domain**
	Jerome S. Bruner **The Relevance of Education**
	Anthony Grasha **Teaching with Style**
	Steven Heller (editor) **The Education of a Graphic Designer**
	Martha Pollak **The Education of an Architect**
	Rhode Island School of Design **Spirals '91**
	Alan Swann **The New Graphic Design School**

New media	Bob Cotton **Understanding Hypermedia: from Multimedia to Virtual Reality** Jessica Helfand **Six Essays on Design and New Media** Lisa Lopuck **Designing Multimedia** John Maeda, Steven Madoff et al **Websites: The Future of Business and Design** Stephanie A. Redman **Taking the Leap into New Media** Lynda Weinman **Designing Web Graphics 3** Mark Von Wodtke **Mind over Media**
Magazines and journals	American Institute of Graphic Arts Journal of Graphic Design Design Issues Information Design Journal Visible Language
Media and technology	George P. Landow **Hypertext 2.0** Marshall McLuhan **The Medium is the Massage** Neil Postman **Conscientious Objections** Neil Postman **Technopoly**
Methodology	Allen Hurlburt **The Design Concept** Don Koberg and Jim Bagnall **The Universal Traveler** Josef Muller-Brockmann **The Graphic Designer and His Design Problems**
Organization systems	Krome Barratt **Logic and Design** Le Corbusier **The Modulor 1 and 2** Gyorgy Doczi **Power of Limits** Richard Hendel **On Book Design** Christine Herter **Dynamic Symmetry** Allen Hurlburt **The Grid** Allen Hurlburt **Layout** Josef Muller-Brockmann **Grid Systems** Adrian Wilson and Sumner Stone **The Design of Books**
Perception	Rudolf Arnheim **Visual Thinking** Carolyn M. Bloomer **Principles of Visual Perception** Donis A. Dondis **A Primer of Visual Literacy** Gyorgy Kepes **Language of Vision** Laszlo Maholy-Nagy **Vision in Motion** Richard Zakia **Perception and Imaging** +

Translation   + Kenneth Hiebert **Graphic Design Process**

Typography   Rob Carter **American Typography Today**
    + R.Carter, B. Day and P. Meggs **Typographic Form + Communication**
     Adrian Frutiger **Type, Sign, Symbol**
     Karl Gerstner **Compendium For Literates**
     Edward Gottschalk **Typographic Communications Today**
     Robin Kinross **Modern Typography: an Essay in Critical History**
     Ruedi Rüegg **Basic Typography: Design with Letters**
     Emil Ruder **Typography: A Manual of Design**
     Herbert Spencer **The Visible Word**
     Jan Tschichold **Assymetric Typograhy**

Terminology

Abstract having content that depends on intrinsic form rather than on narrative content or illustrative representation; to take away or remove; to summarize, simplify, distill or find the essence of a larger whole

Aesthetics the process by which visual form is created, using formal visual principles which are directed towards a purpose or message

Ambiguity uncertain, obscure or able to be understood in two or more ways

Analysis an examination of a whole, its elements and their relationships

Anthropomorphic the attribution of human characteristics, behaviors, or motivations to objects, animals or nature.

Application a project that puts a student's knowledge to use, a computer software program

Area a two-dimensional reading, around, apart, between

Articulate to put into words

Asymmetrical unbalanced proportions

Audience a group of people who receive a message

Axis a sensed rather than perceived center of a plane or volume, ie. center line

Balance components of equal strength creating a visual equilibrium, can be symmetrical or asymmetrical, "dynamic balance"

Basic Course The Bauhaus' foundations course first taught by Johannes Itten

Bézier Curve the curves found in vector-based computer programs that are made of mathematically defined line segments that are controlled by anchor points or handles

Chroma color or its presence, synonym for saturation

Chromatic having hue or color

Clarity the state of being free from visual clutter

Climate warm or cool difference of colors, ie. temperature

Closure an act of closing; forming a figure by completing a shape or line in one's mind; visual continuity

Coherence integration of diverse elements, relationships or values

37

Critique a discussion where the merits and demerits of a piece of art or design are judged accordingly

Curve a linear message with a continuously changing direction

Decisiveness determining the objective, to do in a determined way

Depth a linear measurement from the view-point of an object (from front to back)

Depth perception the ability to judge the distance of an object and/or the spatial relationships among objects

Design (verb) to intend, to devise for a specific function or create according to a plan

Design (noun) a sketch, a plan, an arrangement of elements in a product or work, the creative process of executing aesthetic or functional designs

Design-only foundations program a first year of study where graphic design, industrial design, interior and/or architectural design students, or a combination thereof, take the same courses

Didactic intended to teach or to convey information while entertaining

Dimension the actual size of forms within the visual field measured in standard units; height, width and depth may be measured

Discipline a field of study

Discovery obtaining knowledge of for the first time

Drawing a graphic process that depicts forms on a surface

Dynamic of or relating to force, energy, activity or change

Edge the line where a shape, area or element begins or ends

Elements identifiable, separate parts of visual form

Equidistant equally distant

Essence the nature of something

Expression the goal of communication

Fibonacci Progression the sequence 1, 1, 2, 3, 4, 8, 13 where the first two terms are 1 and 1 and each succeeding term is the sum of the two immediately preceding

Figure outline or contour of an object, shape, form or image

Figure/Ground the relationships between the figure or form and the background or that which is behind, without dominant form; smaller visual elements are often perceived as figure and larger areas as ground

Fixed Forms ready-made elements whose form is predetermined, for example typographic fonts and clip art.

Ground the background or that which is behind

Grouping laws gestalt laws that describe perception of groups of figures based on tendencies to see visual stimuli in their simplest form by grouping information; see similarity, proximity, closure and good continuation

Height the distance from the bottom to the top

Hierarchy a graded or ranked series often based on the order of importance

History of graphic design the chronological study of graphic design and graphic designers that have come before

Hypermedia a collection of keywords, graphics, images, video and sound linked by associations

Hypertext a collection of keywords linked to associated information

Illusion an false perception or contradiction between what is perceived and what actually exists

Informal structure free, independent organization within a composition

Integrated foundations program a program which combines students from art and design majors; may also include crafts, photography and architecture

Interactive a mutually or reciprocally active electronic communication system that involves the user's orders or responses

Interval the space between elements

Intuitive having insight without rational thought

Irregular lacking perfect symmetry or evenness

Kinetic describes motion caused by a force

Legible capable of being read

Liberal arts studies at a university that are intended to provide general knowledge and develop intellectual capabilities, for example language, philosophy, history, and literature

Line an element, length reading dominates its width reading; a point in motion

Location shared with all other elements, ie. relativity

Logo an identifying visual statement

Matrix a kind of a structure that places information on coordinates so that information can be gathered horizontally or vertically.

Meaning the thing that one intends to convey

Medium (plural media) intermediate material for expression

Timeless having no beginning or end

Tonality the arrangement of tones in a visual piece

Tool an object that helps the user work, used to optimize efficiency

Transition passage from one state, subject or place to another

Translation a change to a different substance, form or appearance

Typeface all type of a single design

Unit a single quantity

Unity oneness

Variety having different forms

Vector a series of fixed points, lines and fills that create an image

Virtual existing in essence or effect, such as on a computer monitor

Visual elements of form the characteristics that distinguish one visual mark from another, including shape size, color and texture

Visual language a collection of design elements that make up a whole

Visual literacy describes the ability to recognize, understand and apply the formal aesthetic principles, and to view any image as an abstraction and knowing and understanding terminology that relates to art and design; also known as visual sensitivity

Volume space that is contained within a three-dimensional object, the product of points, lines and planes

Weight a heavy object or to make heavy

End notes

[1]Tim McCreight, *Design Language* (Cape Elizabeth: Brynmorgen Press, Inc, 1996).

[2]*The Idea of Design,* ed. Victor Margolin and Richard Buchanan, *Wicked Problems in Design Thinking* (Cambridge: The M.I.T. Press, 1995), 7.

[3]Susan E. McKenna, "Theory and Practice: Revisiting Critical Pedagogy in Studio Art Education," *Art Journal* (Spring 1999): 78.

[4]American Institute of Graphic Arts, *Graphic Design A Career Guide and Education Directory* (Boston: Reynolds DeWalt Printing,1993), 8.

[5]Candice Wolff Sanders, *Seizing the Digital Future, Shaking the Foundations of Design Education,* paper read by author, Design Education for the 21st Century Discussion Panel, cassette.

[6]Roberley Bell Rochester Institute of Technology, interview by author 21, March 2000.

[7]Robert Swinehart Carnegie Mellon University, interview by author, 29 February 2000.

[8]Steven Heller and Teresa Fernandes, Becoming a Graphic Designer (New York, John Wiley & Sons, Inc.,1999), 268.

[9]American Institute of Graphic Arts and National Association of Schools of Art & Design, *Degree Programs and Graphic Design: Purposes Structures & Results*, 1-2.

[10]Ibid, 2.

[11]American Institute of Graphic Arts and National Association of Schools of Art and Design, *Selecting and Supporting Graphic Design Faculty*, 1.

[12]Ibid, 1.

[13]John Malinoski Virginia Commonwealth University, e-mail interview by author, 23 March 2000.

[14]Eileen Bushnell Rochester Institute of Technology, interview by author 24, March 2000.

[15]Nancy Ciolek Rochester Institute of Technology, interview by author 14, January 2000.

[16]Linda Hightower Rochester Institute of Technology, *A Graphic Design Primer* Evaluation Form, April 2000.

[17]Dan Boyarski Carnegie Mellon University, interview by author, 28 February 2000.

[18]Roberley Bell Rochester Institute of Technology, interview by author 21, March 2000.

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Colophon

QuarkXPress 3.31 and a G3 Power Macintosh
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The Adobe version of the Univers family was
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taken with a Fugi MX-700 digital camera. It was
digitally printed and bound on a Xerox Docutech.