Evaluating information design: An Online study guide designed for a new distance learning course

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Evaluating Information Design
An online study guide designed for a new distance learning course

Clifford M Commanday

May 14, 1997
I, Clifford M Commanday

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Dedication

I dedicate this thesis to my new niece, Tori Leigh Durow, and her mother, my sister Lisa, for their reminding me of how wonderful learning and exploring can be.

Special Thanks

To Roger, Deborah and John, my thesis committee; they have guided me along a difficult and worthwhile path.

To my parents, who are my family, my support, and my friends.
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Introduction

Thesis

This thesis focuses on the creation of an online module for a new course offered by the Rochester Institute of Technology (RIT), titled Twentieth Century Information Design. As an information design product, the module's intent is to enhance a student's perspective on the evaluation of information design through the presentation of a range of theories and their relationship to the processes of graphic design.

This course, for which the online module was designed, has been developed jointly by the Department of Graphic Design and the Office of Distance Learning (ODL), and is sponsored by the Center for Digital Media.

The creation of such a complex product necessitates a strong awareness of process. There are eight distinct phases of process that this thesis report will discuss: thesis project definition, research and analysis, synthesis, ideation, evaluation, implementation, dissemination, and retrospective evaluation.

Interactivity

The interaction of the student and the course content in the context of a distance learning course environment was a primary concern throughout development. The following definition was created, and proved to be a guiding force. This definition is further discussed in the Synthesis section of this thesis report.

Asynchronous online teaching and learning is less about technical interactivity, but more about the facilitation of human discourse via digital means.
Information Design

Information design has become an integral aspect of contemporary society. In this time of ever-increasing technological sophistication, it is crucial to remain focused on the communication of content. New possibilities of dynamic and interactive displays have the potential to distract designers from this essential core of information design - a focus on content-based design.

The realities of what constitutes effective and informative design are now in a state of flux; the new theories, practices and processes that must be forged to stabilize the field of graphic design should be rooted in the related fields of communication, design, education, and technology.

Information design is meant to inform. The following are a series of quotes concerning the definition and importance of information design:

*Information design is an emerging professional design activity in response to the needs of the information age. It is an area of design that is concerned with understanding reader and user response to written and visually presented information. The kinds of problems germane to information design include legal documents, business forms, diagrams, guidebooks, transportation maps, charts, tables, instructional materials, wayfinding systems, and digital information systems.*

Bruce Meader, Rochester Institute of Technology

*Information design is a synthesis of function, flow, and form. Function is defined as utilitarian need with a definite purpose: to make information easy to find, read, comprehend, and recall. Flow refers to the logical sequence of information. Form means dynamic information patterns and clear rational organization.*

Ladislav Sutnar
Thesis Project Definition

Thesis
There were three intended outcomes for this thesis:

1. Creation of an *Evaluating Information Design* module to support the course, *20th Century Information Design*.

2. Performance as Assistant Project Director for the development of this course; responsibilities including the maintaining of a whole systems perspective during course development.

3. Dissemination through authorship of observations and conclusions reflecting the development of the module and course.

Thesis Planning
Comparable to the concept that structure is helpful in creating visual designs or written compositions, order and planning is a pragmatic necessity to structure the wide breadth of activities involved in developing a thesis. After initial research into possible thesis topics, a topic was chosen and a *Thesis Planning Report* was developed. The planning report describes not only the project to be completed, the course module, but also the context and necessity for the project. (Please refer to Appendix A.)

A directed mission statement was written, and the goals, objectives, and strategies for completing that mission are outlined and described in detail. A projected timeline was developed, highlighting the different phases of research and analysis, synthesis, dissemination, and evaluation. (Please refer to Appendix A.)

These planning decisions are symbolized in the methodology diagram developed as part of the planning report. This diagram uses the metaphor of a prism; the information from the areas within the circles on the left is collected within the prism and then joined into a single band of “light,” becoming the thesis application module on the right. At the time, the module was titled *Information Design Theory Module*. (Please refer to Appendix A.)

One reason the prism metaphor is effective is its ability to be read from both directions. From the left, it represents the consolidation of a multitude of theories and pragmatics joined to become the module within the depicted course. Alternately, the diagram can be viewed from the right, representing a breakdown of the supporting structures of content within the module.

Labeling the prism as “interactivity” implies that the joining of these potentially vastly different areas will be guided through a consideration of interactivity. This description is further defined and refined by the goals within the planning report. The combination of such visual tools as the methodology diagram and written tools such as the goals and objectives, was used to help plan the development of the thesis. (Please refer to Appendix A.)
Research and Analysis

Information design’s strong focus on content necessitates in-depth research and planning both on a macro and micro level. Initial research focused upon the concept of distance learning and on the selection and use of individual theories to be included in the *Evaluating Information Design* module.

**Distance Learning**

Although there has been a great deal of attention given to distance learning in the past few years, it has a longer history which spans over twenty years. A wealth of documents were available describing distance learning’s origins and development.

Material was gathered as a case study from Rockland Community College (RCC), a two year college of the State University of New York (SUNY), in Suffern, New York. RCC is an excellent choice as a case study to learn the rationales and needs for the development of a program of distance learning. At the time, the college was mid-sized, with approximately 7000 students; it was, and is, characterized by a strong commitment to its community. Documents collected included printed course guides, orientation presentations on video, and evaluation reports, both informal and professional.

These evaluation reports described the distance learning student body as diverse, including working professionals and parents, the incarcerated, full and part-time students, and people wishing to slowly immerse themselves as students into the academic world. Flexibility in time requirements and an independent, yet guided, working environment are the characteristics which initially brought distance learning success.

This success is epitomized by a student response, *Telecourses allow the time and flexibility to accomplish my goals.*

[From an in-house report, *Student Perceptions of Telecourses at RCC*, Fall 1991, reported by Charles Secolosky, Office of Instructional Research, September 1992]

These reports also made recommendations for the potential increase of student-teacher discourse. The consistent element within these recommendations was that they all focused on increasing student-teacher accessibility and interaction. Fifteen years ago, email was hardly known of outside the secluded scientific and academic communities. However, the introduction of email is one example of such a recommendation for increasing discourse, one that has taken well over a decade to become a practical reality. Early versions of what we would now call “voice mail” were also recommended.
Communication via Technology

This research of distance learning prompted further research into communication via technology. The value and depth of the modes of communication possible via technology have followed a progressive path over the past decades. Now design and communication principles are beginning to become integrated into the actual digital messages.

Early electronic communication of a few decades ago consisted only of text, unformatted by any typographic standards. Even before email reached a small techno-savvy population, there existed online environments called MUDS - multi-user dungeons, deriving its name from the popular fantasy role-playing game, Dungeons and Dragons. These MUDS allowed users to connect to a remote system and exchange text messages in a group environment.

In the early 1980's commercial online services, such as Compuserve and Prodigy, began to become popular. It was not until the middle 1990's that the "internet explosion" happened, where a mass population began to be aware of the Internet and email possibilities. However, all this communication still existed as unformatted text. It is still only in prototype and experimental advanced systems that this mass communication is influenced by the particular typographic and visual standards of information design.

The technology has only recently arrived to enable graphic designers to influence the communication of the mass public online. The typographic variables of weight, size, font, and position are only beginning to become integrated into the email functions of the more popular web browser and email client softwares.

Experimental projects are also testing the boundaries of what type of variables can be utilized to aid communication online. In addition to typographic experimentation, there has been experimentation with virtual three-dimensional environments in which people can communicate through the use of avatars. An avatar is a visual image that serves to represent a person online; it may be polygon-generated computer graphics, photographic, or even abstract imagery. These image-based, experiential worlds are one of the main ways technology is attempting to increase interactivity.

At this time, however, it appears that much of this experimentation is being directed by technology experts and not information design experts. There exists a great need for trained designers to influence these new directions through their knowledge of information structures and visual variables.
Research and Analysis continued

Theory
Another essential portion of research for this thesis study focused upon defining global relationships between and connections among theories from different disciplines. The approach was multidisciplinary, building on the premise that creators of information design can draw from the theories of varied disciplines in order to create a variety of perspectives and content-organizing approaches. To achieve this end, disciplines were researched to discover pertinent theories. Initial disciplines covered were design, art, communication, pedagogy, psychology, and information technology.

Interdisciplinary Experience
In Hope Irvine’s book, *A Thinking Approach to Interdisciplinary Experience*, Irvine presents operational definitions and operational models to explore the processes by which people can produce creative thought.

The book explores the reclassification and reorganization of traditional perspectives on learning. Knowledge itself is extended into ten sub-divided categories exploring the multitude of ways that we can perceive and relate knowledge. Reflecting Irvine’s background and teaching experience in art education, there is a strong focus on discovering different ways creative thought can be generated. For example, Irvine discusses how context can influence the interactions of different types of knowledge:

...These [diagrams] are more complex, presenting a combination of other categories of knowledge. Figure 6 represents systematic knowledge as a combination of general and specific knowledge in the context of a method, a way of working. Competent knowledge, presented in Figure 7, also combines general and specific in the context of a situation, a place of working.
(Irvine,10)

(Please refer to Appendix I.)

Irvine’s book is an important resource for developing or broadening perspectives on learning and critical thinking skills. This perspective of acknowledging different sources and forms of knowledge is similar to Howard Gardner’s theories of multiple intelligences. Both have influenced the development of the module, especially in the creation of the assignments to coincide with presented content.

The assignments to be created for the module would have to be designed to accommodate potential variances in learning styles. Unlike traditional classroom teaching, visual clues of when a student does not understand are not available; a classroom teacher has the immediate opportunity to adapt the course content and presentation, while a distance learning course must be designed beforehand building in as many of these variances as is appropriate and feasible. (Please refer to Appendix F.)
Semiotics
The semiotic model for deconstructing an image is an extremely powerful tool of evaluation. There are variants on the form and terminology, but the underlying primary characteristics are grouped into three categories: semantic, syntactic, and pragmatic.

The following definitions are paraphrased from an AIGA symbol system documentation:
Semantics refer to the relationship of a visual image to a meaning.
Syntactic refers to the relationship of one visual image to another.
Pragmatic refers to the relationship of a visual image to a user.

Although more intricate models of semiotic analysis exist, this basic explanation of these important criteria is an essential component in any student designer’s education.
Organizing Content

The conceptual and visual structure on which the entire module is based is called the Theory Map. This map began as a list of collected theories. Through further definition of interrelationships, a matrix was developed denoting both the theory’s discipline and its relation to a scale of applicability; that is, how general or specific is the theory. (Please refer to Appendix C.)

A circular shape creating a map of spatial relationships was chosen as the final form of the Theory Map. The use of a circle to encompass all the theories visually conveyed more of a whole systems perspective, a sense of a body of theories from different disciplines that have interrelationships pertinent to the evaluation of information design. The evolution of the earlier Theory Matrix to the spatial Theory Map is detailed in the Ideation section of this thesis report.

Theories close to the center of the Theory Map are of a specific nature, while the exterior theories have a more general nature. A general theory discusses ideas that are applicable to a broad scope of contexts, while a specific theory discusses very context-specific information and its relation to other contexts is not as apparent. For example, Platonic theories of communication are more general discussions of the nature of human interaction - a group of theories more easily applicable to a variety of contexts than those associated with object-oriented computer programming theories.

Specific theories are often rooted in practical applications, and are closely connected to a particular group of actions or information. The more general theories often make observations applicable to a wider range of information categories.

Another relationship connoted in a theory’s location on the Theory Map reflects the theory’s connection to the two adjacent discipline categories. A theory within the Pedagogy category that lies closer to the Psychology category than the Design category indicates that its content relates more to that discipline.

For instance, Semiotics is the study of symbols and their meaning, and has its origins in the field of communication. It is placed near to the Design category, indicating a connection to the variables from the discipline of design. Its placement on the outer edge of the map also indicates a general scope of applicability. (Please refer to Appendix C.)

In the process of exploring different possibilities for the visual presentation of the collected theories, new relationships were discovered and created that influenced new organizations of the content. This evolution is an example of how the processes of synthesis and ideation overlap.
Interactivity

Electronic media adds a new dimension to the relationship of a viewer to information. This characteristic of interactivity extends the print-design based concept of a "viewer" to that of a "user."

In the past few decades, however, technology has advanced with such haste that the concepts associated with and the definition of interactivity have been vague and frequently changing. The general public seems to associate the concept and term with whatever technology advertisers promote, or more appropriately, "hype," as the latest epitome of interactivity. As a result the term has been poorly defined. The field of information design, however, focuses more upon the content than this technical interaction.

Content/Technical Interactivity

As part of the development of this thesis, a theory was developed outlining the differences between technical interactivity and content interactivity. The characteristics of technical interactivity refer to the actions taken by the computer and user, and the pragmatics of displaying information. On a higher level, content interactivity refers more to the organization of the information and how it is presented in response to user decisions or choices.

An example of technical interactivity would be the ability to modify the order of presenting information based upon observations of a user's behavior. This example of content interactivity has yet to be fully realized. In the context of online education, content interactivity can be achieved through the facilitation of discourse among students. It is the creation of an interaction of a user and the content through active participation by the user.

From this perspective, the following definition was developed: Asynchronous online teaching and learning is less about technical interactivity, but more about the facilitation of human discourse via digital means.

Theory Connections

One of the greatest benefits of developing a whole systems diagram of a broad spectrum of information is the opportunity to create and/or discover new connections between the elements. The following is a detailed description of one such connection.

There are similarities in the following theories in their approaches to structuring information: hypertext, network structure, designer as information architect, syllabus development and lesson planning. Each of these theories deal with creating structures for bodies of information that are appropriate to the meaning(s) within the content.
The activity of developing a lesson plan involves primarily defining a set of goals for a group of students to achieve, and creating a detailed plan of activities to facilitate those goals. This particular activity of defining goals is also an important beginning in the creation of effective information design. A designer must be acutely aware of what is to be communicated, and have a clear plan of how to accomplish the task.

Developing a syllabus extends the awareness of the intended goals of a single lesson plan to include larger, more encompassing goals, most often for a larger body of students. Development also involves a more comprehensive awareness of the grouping of similar information. This is similar to the concepts associated with whole systems theory, and the types of unified systems design associated with information design products.

Designers can also draw from concepts associated with network structures. Developing a plan for a computer network involves a systematic analysis of the needs of network users, the efficient disbursement of network resources, a comprehensive strategy for communication and collaboration through the network, as well as a practical strategy for potential growth and change of the needs of the users, and the network itself.

There is a direct relationship between the critical thinking skills involved with designing a network and those associated with whole systems theory. There are aspects of thinking involved with the creation of a lesson plan that are similar to developing a content outline before writing a paper. One very successful method of developing an effective paper is to develop a thesis statement (similar to writing a goal for a lesson plan) and devise an orderly presentation of information for support.

These are all processes of critical thinking skills that can be emulated to effectively develop information design.

These strategies for connecting information also relate to those involved with hypertext. The term hypertext refers to a linking of bodies of textual information via a computer network. This connection of (most often) related information has been extended to a concept of hypermedia, where the limitation of linked text expands to include other electronic media forms, such as digital video, sound, and image.

Popular culture has grouped these terms under the singular term of hypertext. Hyper-links can exist without a rational or purposeful relationship between the meanings of the connected information, but the true potential power of this ability is in the structure of the relationships within the information. It is this design of these relationships that raises an electronic capability, linking text bodies, to a conceptual theory that can challenge an information designer.

The concept of a designer as an information architect is well presented by Richard Saul Wurman in his book, Information Architects. Historically, graphic design has placed a large emphasis on visual attributes. Wurman presents a different perspective of a designer of the twentieth century. He promotes that design in this century has become increasingly concerned with the logical structures of information and the appropriate format for this communication. This is Wurman’s rationale for describing designers as information architects; the concept of designers as not only necessary, but extremely influential players in our progress as a society.
The impetus for describing the map in movable layers came from two sources: the visual attributes of clear acetate often used with an overhead projector, and the concept of presenting information in a manner conducive to a content interactive environment - to present the map in layers would allow a user great control over the depth of the information presented.

Once the map form was chosen, more specific details of information design criteria needed to be explored, including typographic relationships, color systems, and spatial relationships. The final result depended heavily upon typographic hierarchies of weight, size and position. (Please refer to Appendix C.)

Potential Map Sequencing

After these specifics were established it was necessary to explore the order of presentation and number of layers for the map. Possibilities included building the map from empty to complete or the reverse; or building upon a simple structure to more complex relationships. (Please refer to Appendix C.)

The finalized sequence begins with outer and inner circles and line notations that begin to provide an environment and context. Presented next is a description of the functionality of the map in regards to a theory’s placement, and then the division of the map into distinct discipline areas. The next layer includes the theories primarily focused upon in the course, followed by a layer of additional theories covered in less depth. This sequence provided the desired amount of clarity and simplicity.
Evaluation

Evaluation Layers
Regular evaluation meetings were an important aspect of the development of this thesis.

Thesis Committee
In addition to three periodic full-committee meetings with all three committee members present, weekly meetings were also held individually with R. Roger Remington, Chief Thesis Advisor, and Deborah Beardslee, Associate Thesis Advisor. These regular meetings allowed for a consistent evaluation of thesis progress.

In addition to being Chief Thesis Advisor, Professor Remington was also the Project Director for the 20th Century Information Design course development. This allowed for a high level of integration between the development of the module and the course. Associate Professor Beardslee’s keen attention to even the smallest of details allowed for the quality and effectiveness of the module’s design to rise each week.

Periodic meetings were also held with Dr. John Ciampa, Associate Thesis Advisor. Dr. Ciampa’s comprehensive knowledge of the world of theory was consistently a valuable resource.

Office of Distance Learning
Weekly meetings were also held with representatives from the ODL. Sonny Stowe, Manager of Instructional Technology, and Dr. Richard Fasse, Instructional Technology Specialist, shared their knowledge and expertise of distance learning each week as the course developed. Topics of discussion at these meetings ranged from the overall organization of the presentation of the content appropriate to a distance learning format, to the conceptual and practical means by which the course could facilitate student and teacher discourse.

Students
As an in-progress evaluation, the module was presented to a class of junior level graphic design students at RIT. These students represented the type of audience for which the course is intended.

From both written evaluations and informal conversations with these students, a great deal was learned. The depth of information available from the world of theory can be potentially daunting to a young student. While the students expressed great interest in the content, they also expressed a need for simplicity. The awareness of the needs of this audience guided the completion of the module. (Please refer to Appendix G.)
Evaluation Summary
Throughout the development of this thesis, the goal of simplicity from information design was a primary focus. The decisions of how much content to include and the level of depth of that content were difficult ones. The answers lied within the goals of the course. The course intended to introduce the students to these theories, not to create new information design experts. It was decided to focus the presentation of these theories by applying them directly to the evaluation of specific examples of information design.

This pragmatic approach seemed to be the best manner to develop broad and comprehensive views of the relationships of and between the theories. This coincided well with the intent of the Theory Map. This structure of the content allowed for a situation where both simple and complex information could be available in the module. The simplified information could be focused upon and students wishing to delve deeper would have that opportunity. One manner in which this is accomplished is having an indexed and extensive bibliography.

Technical Evaluation
The ability of users to modify display preferences in their World Wide Web browser software potentially allows for documents to be displayed differently than originally designed. Browser software of different companies also do not use the same default guidelines for displaying a page, such as the specific margins within the window on the screen and the formulas used to determine line breaks within tabular information. To minimize any potentially distracting differences, all pages of the module were test viewed in the two most used browsers, Netscape Navigator and Microsoft Internet Explorer. The presentation of text as image files was an effective solution to reducing these differences.
Module Development

After the essential organization of the content was established, the surrounding application for the Theory Map needed to be designed. At first, a media-rich multimedia application including complex sound, animation, and digital movies was planned to be developed in Macromedia Director. However, after further defining the audience for the module with Dr. Richard Fasse from the Office of Distance Learning, it was decided to use the World Wide Web as the media form for presentation. This media form is more unified with the concept of an online course, allowing for the updating or changing of information within the module to be done with ease. Also, the technical requirements of the students by the ODL did not include the equipment necessary to view such a media-rich application. Participating students are not required to have CD-ROM drives or multimedia sound capability. Thus, designing the application for such media would have greatly restricted the intended audience.

The development of the module, and the surrounding course, consistently reflected this type of teamwork. The course development team included content specialists from a wide variety of fields, including film and video, library systems, and distance learning. (Please refer to Appendix F.)

This process represents a cyclical feedback loop between implementation and evaluation, and is another example of the phases of this thesis overlapping.

The decisions of determining the appropriate media form for the intended audience is represented by the concept of audience appropriateness. A few theories within the Theory Map discuss this concept: pedagogical lesson planning, human factors, and information theory. It is an essential pragmatic consideration for any design project.

Designing for the Screen

One of the most critical components of designing a product that has multiple pages is to develop an organizational grid. Since the foundation of the module is the Theory Map, the grid was similarly constructed from a circle. (Please refer to Appendix C.)

A quarter-inch unit was used as the base component for the overlapping multiple columns of text. This decision was based upon the unit’s facility to display both 12 point text on 14 point leading for body copy, and 14 point text on 16 point leading for headings. These sizes were determined as the most efficient combination for displaying type on the screen based upon their ease of legibility. Type sizes smaller than 12 point are generally considered to be very difficult to read because of the low resolution display capabilities of computer monitors. A rectangular column to be used solely for navigational information was reserved on the left side of the grid.
Designing screens to include potentially large amounts of text while maintaining specific control over its layout raises many technical issues. The current nature of the World Wide Web allows for many typographic variables to be controlled by the user, not the designer-author. In response, it was decided that the text would be downloaded to a user’s browser software in an image file format to retain the precise layout of the page. However, this raises an essential consideration of web design - balancing speed of delivery with the amount of author control.

Images have larger file sizes than text directly formatted by World Wide Web browser software, thus taking longer to download to the user. Therefore, the technical knowledge of image compression is essential for efficient screen design in this manner. Such specific technical knowledge is just one example of how the activities and capabilities of a designer have been radically added to within the past few years.

Not surprisingly, the major theme of simplicity within traditional information design also relates here - clear and simple web designs often translate into small file sizes and efficient downloading. Technically, the image files were designed in Adobe Illustrator, saved as Encapsulated Postscript (EPS) files, imported into and rasterized by Adobe Photoshop, exported as indexed GIF (Graphics Interchange Format) files, and loaded into World Wide Web browser software as an HTML (Hypertext Markup Language) document written in Bare Bones BBEdit. A helpful resource for learning about image file compression schemes is David Siegel’s book for web designers, Creating Killer Web Sites.

Content Presentation
There was an overall goal for designing the course as completely digital, involving no print material. Aside from one printed student guide, this goal was achieved.

Of the modules designed for the course, this course module was the only one designed solely for the medium of the World Wide Web. The other modules were designed as combinations of media including videotaped lectures, a printed student guide, and supporting documents available in digital form.

Since the course module was independent, not relying on other supporting media, the initial screens which introduce the module’s content were extremely important in developing the right tone and context for student users. These initial screens focused upon a series of quotes collected from both historical and contemporary information designers that highlight the importance and role of information design within the graphic design profession and society at large. These quotes serve to present a pragmatic, human perspective to begin the module.

After necessary screens to provide structure were developed, such as the introduction and main menu, the sections presenting the Theory Map sequence and the individual theory explanations were developed.
The number, or depth, of screens available to each theory was an important decision. This choice would guide the perceptions of simplicity and depth that the in-progress student evaluations highlighted as so important. A decision was made to include approximately three screens per theory: one to introduce the theory, the next to present a pragmatic application of the theory, and the last to provide details of this pragmatic application.

The images chosen to illustrate the theories were mostly of historical focus, including a symbol system designed by the American Institute of Graphic Arts (AIGA) and the railway map for the London Underground.
Thesis Show
A public display of thesis work is part of the requirements for the MFA degree at RIT. It was decided to present a whole systems view of the design process rather than a presentation focusing on the final product only.

Four information panels were produced which represented and described the stages of Research and Analysis, Synthesis, Implementation, Evaluation and Dissemination. (Please refer to Appendix H.)

Module
The *Evaluating Information Design* Module will be disseminated via the World Wide Web. The module will be completely online, utilizing no print media. This is extended to the assignments which shall be administered digitally via email functions. To compensate for the lack of typographic control within standard email, the *First Class Client Software* environment will be utilized; it has the ability to control some basic typographic variables such as weight, size, and color.

Course
The surrounding course, *20th Century Information Design*, will be primarily hosted through the *First Class Client Software* environment. This environment utilizes a desktop metaphor like that of an Apple Macintosh to handle file management and the chat areas.

This replaces the text-only VAX system that the ODL had been using. This graphical interface will hopefully ease the transition for new students, as well as promote the ease of email exchanges and participation in chat areas. RIT is among a small group of universities willing to experiment like this, and such educated risk-taking often leads to great things.

Article
In response to a perceived lack of practical resources for new teachers and creators of distance learning courses, an article addressing this need was written. The article focused upon three clear suggestions:

1. Structure the online course as a series of modular units, not as a linear sequence.
2. Keep primary focus on the content, not the technology.
3. Explicitly require students to be involved and respond.

(Article continued, please refer to Appendix J.)

This article was written for the potential inclusion in magazines such as *THE: Technical Horizons in Education* or *Syllabus.*
Considering any potential improvements for the development of the module, the first evaluation form that was developed, but not used, could have been improved. An informal written evaluation method was used instead of this form due to its over-complexity. However, certain aspects of the form such as the evaluation questions and their respective categories might have proven to provide much useful information.

The development of the Evaluating Information Design module and the 20th Century Information Design course is a wonderful example of effective teamwork. One of the greatest strengths of this course, aside from the pertinence of the content, is its utilization of a variety of media, including an online client software environment, the World Wide Web, and previously created online RIT resources such as the Design Archive Online. This would not have been possible without the diversity of content specialists on the course development team.

In the Fall quarter of 1997, the course will be offered for the first time, by the Center For Digital Media. As with any new course, the unpredicted will sponsor changes and improvements. The areas most likely to develop will be those concerning student-teacher discourse. The First Class Client Software that hosts the email and chat capabilities is new to RIT, and represents a great potential for advancement as our knowledge grows of discourse via digital means.
The perception of the importance of information design is growing. To participate in the development of a new RIT course on this topic was to be part of an important event. The course development reflected the practical realities of creating design in our contemporary world - to work as part of a talented team of diverse content specialists.

The diversity of the content researched for this thesis supports the basic notion of the module created - a variety of perspectives informed by an understanding of a range of disciplines can aid a designer in the creation and evaluation of meaningful design. The variety of content that an information designer must translate into visual form necessitates an equally diverse understanding of the world.

The following two quotes in combination serve well to conclude this thesis report:

*You must keep your finger on the pulse of the times.*
Alexey Brodovitch

*Theories are the eternal verities.*
Dr. John Ciampa
<table>
<thead>
<tr>
<th>Glossary</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>chat</td>
<td>a software environment where people connected via an internet can exchange text messages, often in real-time</td>
</tr>
<tr>
<td>client telecommunications software</td>
<td>software designed to perform functions when connected to an internet; examples are Netscape Navigator, Microsoft Internet Explorer, First Class</td>
</tr>
<tr>
<td>cyberspace</td>
<td>vernacular, a term for the Internet; the intangible conceptual space and connection that is created through people's use and activity online</td>
</tr>
<tr>
<td>distance education</td>
<td>the application of a variety of technologies for the education of students, regardless of proximity or location</td>
</tr>
<tr>
<td>email</td>
<td>electronic mail; digital documents able to be sent via an internet</td>
</tr>
<tr>
<td>gopher</td>
<td>a software protocol for exchanging text files via an internet; designed at Wisconsin University, where the gopher is their school mascot</td>
</tr>
<tr>
<td>html</td>
<td>hypertext mark-up language; the computer code/language used to describe the format and layout of documents on the WWW; originally designed for cross-platform capability of documents by restricting codes to the &quot;lowest-common-denominator&quot; of different platform abilities</td>
</tr>
<tr>
<td>http</td>
<td>hypertext transfer protocol; the software protocol for machines to send and receive html documents</td>
</tr>
<tr>
<td>hypertext</td>
<td>an electronic characteristic by which text activated or selected, often by means of a mouse-click, will redirect a computer to a new location, either within the original document or elsewhere on an internet</td>
</tr>
<tr>
<td>information design</td>
<td>a synthesis of function, flow and form. Function is defined as utilitarian need with a definite purpose: to make information easy to find, read, comprehend and recall. Flow refers to the logical sequence of information. Form means dynamic information patterns and clear rational organization. (Ladislav Sutnar)</td>
</tr>
<tr>
<td>intelligence agents</td>
<td>software programs written to perform tasks through a variety of logical functions intended to imitate human logic</td>
</tr>
<tr>
<td>interactivity</td>
<td>a working definition: of or involving a mode of operation in which there is a reciprocal activity of exchange between user and computer</td>
</tr>
<tr>
<td>internet</td>
<td>a system of connected computers; with a capital I, refers to the large global internet</td>
</tr>
</tbody>
</table>
module  
in this context, refers to a section of the course, Design History in Cyberspace, focusing on a particular theme such as theory; constructed through a collection of content material of a variety of form and media

multidisciplinary  
the interaction of different fields of study; example: science and philosophy

multiple intelligences  
the theory of multiple intelligences suggests that there are a number of distinct forms of intelligence that each individual possesses in varying degrees. Gardner proposes seven primary forms: linguistic, musical, logical-mathematical, spatial, body-kinesthetic, intrapersonal and interpersonal. (from TIP:Theories)

newsgroup  
a software structure where people via an internet can read and post messages sorted by topic

pedagogy  
the study, art and science of teaching and learning

whole systems theory  
a group of theories that consider the interaction and relationships of parts to a sense of the whole; related to the concepts of gestalt

world wide web (WWW)  
a protocol within the global internet to display html documents, perform file transfers, and recently, to facilitate java programming
Bibliography

References: Internet

Feldman, Edmund Burke  

Hertz, Richard  

Irvine, Hope  

McKnight, C., A. Dillon, and J. Richardson, Ed.  

Moore, Michael G., and Greg Kearsley  
Distance Education: A Systems View. CA: Wadsworth Publishing Co.

Schatz, Steven  

Bers, Joshua, Sara Elo, Sherry Lassiter, and David Tames  

Bruckman, Amy  

Bruner, J.  

Cerf, Vinton, as told to Bernard Aboba  
How the Internet Came to Be. The Online User’s Encyclopedia. (Nov 93) Online. Internet. Addison-Wesley. available: gopher://gopher.isoc.org:70/internet/history/how.internet.came.to.be

Crocker, Stephen D.  

Cronbach, L., and R. Snow  

Foner, Leonard N.  
Foner, Leonard N.  

Foner, Leonard N., and Pattie Maes  

Gardner, Howard  

Greguras, Fred  

Kearsley, Greg  

Piaget, J.  

Rutkowski, Tony  

Small, David  

Spodick, Edward F.  
*The Evolution of Distance Learning.* (Aug 1995) Online. Internet. Hong Kong University of Science and Technology Library.

Sterling, Bruce  

Vygotsky, L.  

unknown author  


multiple authors Filemaker Talk Digest. Online. Internet Newsgroup. available: fmpro@blueworld.com
Appendix A, Thesis Planning Report

Situation Analysis ............... .A1
Problem Statement .............. .A1
Mission Statement ............... .A1
Goals, Objectives and Processes .............. .A2
Methodology Diagram .......... .A7
Implementation Plan ............. .A8
Situation Analysis

In this Information Age, graphic designers have become more involved with the design of information intended to be part of an educational activity. The new capabilities of electronic information delivery have created new expectations and needs of users that now affect our daily life experiences. People spend more time interacting with information, yet the realities of what constitutes effective and informative design in this new media-rich environment are in a state of flux.

The new theories, practices and processes that must be forged to stabilize and strengthen the field of graphic design must be rooted in the related fields of communication, education, psychology and technology.

Problem Statement

There are three intended outcomes of my research in this relatively new field of interactivity:

1. Creation of an Information Design Theory module to support the course, Design History in Cyberspace: 20th Century Information Design, currently in development by Professor R. Roger Remington in conjunction with RIT’s Center for Digital Media and the Office of Distance Learning.

2. Performance as Assistant Project Director for the development of this course, my duty to maintain a whole systems perspective constructed of a matrix of pedagogical, communication, and technological theories.

3. Dissemination through authorship of the findings of my research and the effectiveness of the practical application.

Mission Statement

My graphic design thesis is a study of interactivity through an analysis of theories from a variety of perspectives: graphic design, specifically information design, and communication, pedagogy and psychology; this analysis of the potential benefits of interactivity will inform the creation of an electronic application intended to enhance a designers’ perspective on the relativity of such theories to the processes of graphic design.
<table>
<thead>
<tr>
<th>goals</th>
<th>objectives</th>
<th>processes and strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>research and analysis</td>
<td>to explore and gather information regarding interactivity</td>
<td>to analyze the current state of online educational material</td>
</tr>
<tr>
<td></td>
<td>to explore the relationship of information design principles to other fields of study</td>
<td>gather relevant principles and theories from the fields of design and aesthetics, communication, pedagogy, psychology, human factors, technology and linguistics</td>
</tr>
<tr>
<td>goals</td>
<td>objectives</td>
<td>processes and strategies</td>
</tr>
<tr>
<td>-------</td>
<td>------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>to define the term interactivity and its characteristics</td>
<td>to outline the technological and interpersonal factors of human/computer interaction that affect the online experience</td>
<td>draw from educational models of student/learner behavior</td>
</tr>
<tr>
<td></td>
<td></td>
<td>draw from the field of human factors to assist defining physical characteristics of human/computer interaction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to gauge the public perception of interactivity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>utilize direct observation and questionnaires to survey the general public and design audience</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to define interactivity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>collect definitions from different sources (dictionaries, distance learning programs, and surveys)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>create an appropriate composite definition</td>
</tr>
<tr>
<td>to define the potential benefits of interactivity to the field of graphic design</td>
<td>to correlate the technological and interpersonal factors of human/computer interaction to related theories</td>
<td>correlate visual design theories and principles to theories regarding effective communication strategies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>correlate the importance of teamwork in design with communication theories</td>
</tr>
<tr>
<td></td>
<td></td>
<td>correlate theories of educational planning to the processes of graphic design</td>
</tr>
<tr>
<td></td>
<td></td>
<td>correlate theories of educational evaluation techniques to design evaluation techniques</td>
</tr>
<tr>
<td></td>
<td></td>
<td>correlate whole systems theories to the creation of systematic designs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>correlate the theories of semiotics to message making in graphic design</td>
</tr>
</tbody>
</table>
**goals**

- to create a practical application of online education to communicate the benefits of interdisciplinary study to graphic designers

**objectives**

- to create a practical application of online education that applies the benefits of interactivity

- to present a whole systems view of chosen fields of theory in relation to graphic design

**processes and strategies**

- utilize www page authoring tools, Macromedia Director multimedia authoring tool, and traditional print delivery systems

- present both macro and micro views of each field of study and associated theories

- utilize prism metaphor from methodology diagram as a construct to present how related theories combined can amplify the potential effectiveness of information design: the transformation and amplification of varied perspectives into a single band of clear white light

- utilize methodology diagram as a navigational aid for application

- utilize correlations of design and theory as defined by research

- utilize examples of graphic design from RIT's Graphic Design Archive, and from contemporary designers

- construct a whole systems view of media involved (media map)
**goals**

| to integrate the application with the course, Design History In Cyberspace: Twentieth Century Information Design |

**objectives**

| to integrate relevant technological capabilities with thesis design objectives and course objectives |

**processes and strategies**

| effectively utilize current technologies: such as First Class Client Telecommunications Software, JavaScript, HTML and Perl programming languages for the www, cgi server-based scripts if available |

**evaluation**

| to evaluate the effectiveness of the application of this research, and the impact it will have on the design community. |

| to evaluate the effectiveness and appropriateness of the module created |

| utilize external evaluation professional (contingent on inclusion within yet approved productivity grant) |

| create a questionnaire for potential users of the module |

| test the module with audiences of different familiarities with the content matter |

| present module to a RIT graphic design junior class; utilize an evaluation method such as discussion or a questionnaire |

| to evaluate the effectiveness of the module within the context of the supporting course |

<p>| create a questionnaire for the users of the module |</p>
<table>
<thead>
<tr>
<th>goals</th>
<th>objectives</th>
<th>processes and strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>dissemination</strong></td>
<td>to communicate through authorship the findings of my research on interactivity to the professional and educational societies of designers.</td>
<td>write a series of articles focusing on individual fields of theory and their relationship and benefits to the field of graphic design</td>
</tr>
<tr>
<td></td>
<td>to write articles for design and technology oriented publications that communicate the benefits outlined through my research</td>
<td>create a series of articles that address different audiences, through presentations of different depths of content and different writing styles</td>
</tr>
</tbody>
</table>
interactive design: a multidisciplinary theoretical perspective

interactivity: a working definition: of or involving a mode of operation in which there is a reciprocal activity of exchange between user and computer
Implementation Plan

- Summer:
  1. Full course begins
  2. Winter course begins
  3. Spring course begins

- Fall:
  4. Winter course ends
  5. Summer course ends
  6. Summer course begins
  7. Fall course begins

- Winter:
  8. Winter course ends
  9. Summer course ends
  10. Summer course begins

- Spring:
  11. Spring course ends
  12. Spring course begins

- Summer:
  13. Summer course ends
  14. Summer course begins

- Fall:
  15. Fall course ends
  16. Fall course begins

- Winter:
  17. Winter course ends
  18. Winter course begins

- Spring:
  19. Spring course ends
  20. Spring course begins

Design History in Cyberspace:
- Development planning
- Archive online development
- Full course development begins
- Video lecture/lecture module development
- Information gathering to prepare for new course development
- Traditional on-campus lecture
- Distance learning delivery
- On-line delivery
Appendix B, Thesis Development

Theory Matrix ................. ............ .B1
Semiotic Evaluation Model ......... ............ .B2
<table>
<thead>
<tr>
<th>Theory Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>universal</strong></td>
</tr>
<tr>
<td><strong>aesthetics theory</strong> (klee, albers) (rudolph, arnheim)</td>
</tr>
<tr>
<td><strong>semiotics/sign theory</strong> (izakias)</td>
</tr>
<tr>
<td><strong>interdisciplinary experience</strong> (irvine)</td>
</tr>
<tr>
<td><strong>archetypes</strong></td>
</tr>
<tr>
<td><strong>designer as information architect</strong></td>
</tr>
<tr>
<td><strong>media/immmedia theory</strong> (campana)</td>
</tr>
<tr>
<td><strong>multiculturalism</strong></td>
</tr>
<tr>
<td><strong>human factors/ergonomics</strong></td>
</tr>
<tr>
<td><strong>contrarian theory</strong> (postman)</td>
</tr>
<tr>
<td><strong>modernism</strong></td>
</tr>
<tr>
<td><strong>structuralism</strong></td>
</tr>
<tr>
<td><strong>deconstructivism</strong></td>
</tr>
<tr>
<td><strong>post-modernism</strong></td>
</tr>
<tr>
<td><strong>information theory</strong> (tufte, wurman)</td>
</tr>
<tr>
<td><strong>linguistics</strong></td>
</tr>
<tr>
<td><strong>methods of evaluation theories</strong></td>
</tr>
<tr>
<td><strong>artificial intelligence theories</strong></td>
</tr>
<tr>
<td><strong>fuzzy logic</strong></td>
</tr>
<tr>
<td><strong>social role playing</strong></td>
</tr>
<tr>
<td><strong>information anxiety</strong> (wurman)</td>
</tr>
<tr>
<td><strong>interpersonal/person to group communication theories</strong></td>
</tr>
<tr>
<td><strong>organization theories related to library systems</strong></td>
</tr>
<tr>
<td><strong>technical interactivity/content interactivity</strong></td>
</tr>
<tr>
<td><strong>hierarchy of information</strong> (tschichold/moyer/bauhaus)</td>
</tr>
<tr>
<td><strong>management theory</strong> (peters)</td>
</tr>
<tr>
<td><strong>distance learning theories</strong></td>
</tr>
<tr>
<td><strong>internet/network structure theories</strong></td>
</tr>
<tr>
<td><strong>intelligence agents</strong></td>
</tr>
<tr>
<td><strong>object oriented programming</strong></td>
</tr>
<tr>
<td><strong>specific</strong></td>
</tr>
<tr>
<td><strong>design/art</strong></td>
</tr>
<tr>
<td><strong>communication</strong></td>
</tr>
<tr>
<td><strong>pedagogy</strong></td>
</tr>
<tr>
<td><strong>computer sciences</strong></td>
</tr>
<tr>
<td><strong>psychology</strong></td>
</tr>
</tbody>
</table>
Semiotic Evaluation Model

- Linguistics
- Typography
- Semiotics
- SW's Journalism
- Semiotics
- Message Analysis
- Semiotics
- Reaction Personal
- Visual Analysis
- Typography
- Modernism
- Design

1.9.97

Chart
Evaluation Model
Clifford M. Commandary
Appendix C, Theory Map

Theory Map ...................... ........ C1
Potential Storyboards ................. C2
Potential Storyboards
Appendix D, Implementation

Screen Grid .................... D1
Application Structure Map ..... D2
This is sample text to see how many words will fit within a line. This is sample text to see how many words will fit within a line. This is another test of how many words shall work within this space. This enlarged box seems to be a much better fit for the amount of text I will need.

This is Univers Cond. Light
Appendix E, Implementation

Prototype Screen Development .......... E1
Final Application Screen Shots .......... E4
TheoryMap

Begin
The function theories outline the overview of the complete connection.

<table>
<thead>
<tr>
<th>Overview</th>
<th>Categories</th>
<th>Map</th>
<th>Function</th>
<th>Theories Level 1</th>
<th>Theories Level 2</th>
<th>Theories Level 3</th>
<th>Complete Map</th>
<th>Connections</th>
</tr>
</thead>
</table>

this is sample text. this is sample text. this is sample text. this is sample text. this is sample text. this is sample text.
Prototype Screen Development

TheoryMap

Overview  Categories  Map  Function  Theories Level 1  Theories Level 2  Theories Level 3  Complete Map  Connections
Final Application Screen Shots

Netscape: Design History in Cyberspace

Location: file:///Jaz%2010B/Documents/%200%20%20MFA/19962%252F%2520thesis/web%20application/site/html/intro1b.html

20th Century Information Design

presented by
Rochester Institute of Technology

Department of Graphic Design Office of Distance Learning Center For Digital Media
20th Century
Information Design

Module Four
Evaluating Information Design
Information design is what makes the design profession relevant; it is the intermediary between information and understanding, not just something with an aesthetic or style.

Information design is not a subset of graphic design, but its core.

Rick Gréfe
president, AIGA
American Institute of Graphic Arts

An information designer must draw from a wide variety of knowledge in order to communicate effectively.

This module will focus on a range of multidisciplinary theories that can inform the evaluation of information design.
Life is pain, joy, beauty, ugliness, love and when we understand it as a whole, at any level, that understanding creates its own technique.

But the contrary is not true: technique can never bring about creative understanding.

Krishnamurti
*Education and the Significance of Life*

To most people, design means producing something visual; whereas I mean looking at the problem taking it apart and putting it back together again. It's as much about the process as anything else.

Erik Spiekerman
*MetaDesign*
What is a Theory?

Webster's New Collegiate Dictionary defines a theory as:

- a systematic statement of principles involved
- a formulation of apparent relationships or underlying principles of certain observed phenomena which has been verified to some degree

An established theory represents:
- a body of thinking
- a collection of critical thinking skills
- that has survived over a period of time.

Exposure to unfamiliar theories can represent an opportunity to radically expand your point of view.
The world of theory is a large place. It is easy to be overwhelmed by the great variety of thought available.

An established theory represents a body of thinking, a collection of critical thinking skills, that has survived over a period of time.

Exposure to unfamiliar theories can represent an opportunity to radically expand your point of view.

To present a breadth of theories that can inform the process of creating and evaluating information design, the Theory Map was developed.

This map will communicate the relationships among the various theories that inform information design. It is presented in movable layers, allowing you to view this information at different depths of content.

You may click on any theory on any level for an in-depth review.

The theory Map in itself is a piece of information design, and represents a very specific perspective of a designer's point of view.
A theory’s placement within the map communicates from which discipline it is derived, as well as the theory’s scope of applicability. Theories closer to the center are of a specific nature, while the exterior theories have a more general nature.
An information designer must draw from the knowledge of many disciplines in order to communicate effectively. These categories have been chosen as prominent areas to find relevant theories that can inform the creation and evaluation of products of information design.

Of course, as we are all individuals, you may know of other disciplines that might influence your perspective. As you progress through the levels of this Theory Map, be aware of how your personal expertise in an area might fit in.

Keep in mind, Alexy Brodovitch once said, 

"You must keep your finger on the pulse of the times."

The variety of content that an information designer must translate into visual form necessitates an equally diverse understanding of the world.
A combination of all the layers, the completed theory map represents a whole systems view of a variety of theories from a variety of disciplines.

Creating design with this multi-disciplinary approach will not guarantee effective information design products; yet in the field of information design it is just that which is most important of all—the information itself.

Such a multi-disciplinary approach does provide for the opportunity of intelligently managing and translating diverse information.

The theories in red are the primary theories focused upon in this course.

Click on any theory for an in-depth review.
Evaluating Information Design

Introduction

Part One: Macro View
Theories that Inform

Part Two: Micro View
Applying Theory

Assignments

Vocabulary

Credits
Semiotics

The semiotic model serves as an objective basis for evaluating the relative success of a design in relation to three basics of communication.

Anything designed has three distinct dimensions: semantic, syntactic and pragmatic.

Semantic refers to the relationship of a visual image to meaning

Syntactic refers to the relationship of one visual image to another

Pragmatic refers to the relationship of a visual image to a user

Semiotics, or sign theory, is an extremely useful tool for evaluation.

Choose continue to see a practical application.
Semiotics

**Semantic**
How well does the design represent the message?

Would people from various cultures understand the message?

**Syntactic**
How well do the parts of the design relate to one another?

Is the construction of the design consistent in its use of figure/ground, solid, outline, overlapping, transparency, orientation, format, scale, color and texture?

**Pragmatic**
Can a person use the design for its intended use?

Is the design legible in typical viewing distances and lighting?

This is a sample of images from a system of passenger/pedestrian oriented symbols prepared by the American Institute of Graphic Arts.

Use the questions on the left in their respective categories to evaluate these designs.

Choose continue for a detailed analysis of the first symbol.
Semiotics

Semantic
This symbol is clearly an indication of a telephone.

People from a variety of cultures would be able to recognize this image.

Syntactic
The image is composed of simple shapes that are clear and distinct.

The curves of the shapes within the image relate well to each other, as well as to the other symbols within the system.

Pragmatic
This symbol serves well to indicate the availability of a telephone.

The clear and distinct shapes make for both easy viewing at long distances and reproductions at a variety of sizes.

Choose continue to return to the Theory Map.
Appendix F, Course Development

First Class Structure Map .................. F1
Media Map .................................... F2
Task Overview ................................. F3
Timeline ....................................... F4
Course Documentation ........................ F5
Module Assignments .......................... F6
New Course Development
20th Century Information Design
Media Map
<table>
<thead>
<tr>
<th>Course Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall Quarter Start</strong></td>
</tr>
<tr>
<td>Course materials uploaded</td>
</tr>
<tr>
<td>Course materials in bookstore</td>
</tr>
<tr>
<td>One-on-one mailing</td>
</tr>
<tr>
<td>Orientation mailing</td>
</tr>
<tr>
<td>Final production</td>
</tr>
<tr>
<td>Course material completion - print, digital, video</td>
</tr>
<tr>
<td><strong>Course: RHR Teacher's Summer Class</strong></td>
</tr>
<tr>
<td>SF cataloging DADL</td>
</tr>
<tr>
<td>Potential development of surrounding web site</td>
</tr>
<tr>
<td>DADL prototype review</td>
</tr>
<tr>
<td>Group discussion of discourse within course assignments</td>
</tr>
<tr>
<td>Thesaurus modules completed (C+XK)</td>
</tr>
<tr>
<td><strong>May</strong></td>
</tr>
<tr>
<td>RHR available: May 26-30, June 2-6, 23-30, July 1-15</td>
</tr>
<tr>
<td>Video production/editing - bunting[2] RHR (features)</td>
</tr>
<tr>
<td>RHR+CC design form for potential video presentation of module 4</td>
</tr>
<tr>
<td><strong>April</strong></td>
</tr>
<tr>
<td>Weekly meetings begin: Rexier class (C+RF)</td>
</tr>
<tr>
<td>First class workshop</td>
</tr>
</tbody>
</table>
Environment: Conferences for Module Four:

- Responsiveness or not well presented
- This will be done in the first class software
- Other students. There are no right or wrong answers here. Any well presented
- In the hopes of developing an interesting discourse amongst you and
- In addition to the essay, you are also required to respond to other essays.

Part Two:

- Environment by the class outline in the course syllabus
- Post your essay in the module four conference in the first class software
- Comment on the relevance of these themes.
- Include the processes and theories presented in this module when appropriate.
- Processes you use to evaluate the effectiveness of a piece of information design
- Write a two-page well written essay from your point of view detailing the
- How do you evaluate information design?

Part One:

Assignment #1

Assignment #2

Assignment #3

Assignment #4

Twentieth Century Information Design

Course Development

Module Assignments
Appendix G, Thesis Evaluation
Appendix H, Thesis Show

Gallery Plan for Information Panels .............. H1
Thesis Show Information Panels .............. H2
Evaluating Information Design
An online study guide designed for a new distance learning course

Clifford M Commanday
The thesis described is an investigation into the field of information design, focusing on the integration of communication and technology in the context of graphic design. The project explores the historical development of graphic design and its role in contemporary communication, emphasizing the importance of interactivity in digital media.

**Project Description**

The thesis introduces the role of graphic design in the modern world, highlighting its evolution from a purely visual art form to a multidisciplinary field that intersects with technology. It discusses the influence of digital technologies on design practices and the role of graphic design in education and communication.

**Research and Analysis**

The research section delves into the history of graphic design, particularly focusing on the development of information design in the context of educational and communication needs. It examines the impact of digital tools on design practices and the role of interactivity in digital media.

**Synthesis**

The synthesis section integrates the findings of the research, highlighting the importance of interactivity in contemporary graphic design. It discusses the future of graphic design in the digital age, emphasizing the need for designers to adapt to new technologies and methodologies.

**Theory Matrix**

The matrix outlines the relationships between various theories and design principles, providing a comprehensive guide for understanding the role of graphic design in contemporary communication.
Ideation

Transition from Theory Map to Theory Map

Potential Brainstorm Sequence for Theory Map
As an interdisciplinary evaluation, the module was presented to a class of RIT graphic design students. The students represented an audience true to that intended by the module.

From post-contact evaluations and informal discussions with the students, a great deal was learned. The interdisciplinarity of the information design was talked about the world of theory informing design evaluation. It can be particularly daunting for young students. While the emphasis on research methods was emphasized in the content, they also advocated a need for simplicity. This understanding of the audience guided the completion of the module.

**Evaluation**

The Center for Digital Media at RIT serves as informing the course, and it is not shown for leading or understanding audience, but it can be used or otherwise. The interdisciplinary nature of the content of the course informs the student model for student use in the workplace.

RIT has a unique commitment to its professional faculty. In its approach to developing and delivering high quality distance learning programs, RIT has identified a need to be able to effectively translate the tools, techniques, and methodologies of the original course, materials designed by many of the instructors featured in the course.

**Dissemination**

This course is necessary for anyone who wishes to present, design, prepare and implement messages. Students in various programs, such as design, art, photography, and communications, as well as those in more technical fields such as information technology, and find this course of particular interest to their needs and complementary to the work they do in their major. Most users will be undergraduate, postgraduate, and professional designers.

This course will not require previous experience; however, additional use of the content is enriched with previous experience in history, history of art, history of design, history of photography, and photography and visual communication, including graphic design, photography, film, and video, and media.

Students in creative programs such as design, art, photography, and communications, as well as those in more technical fields such as information technology, and find this course of particular interest to their needs and complementary to the work they do in their major. Most users will be undergraduate, postgraduate, and professional designers.
Appendix I

Interdisciplinary Diagram ................. I1
A Thinking Approach to Interdisciplinary Experience, Hope Irvine, p10

Figure 6: Systematic Knowledge

Figure 7: Competent Knowledge
Appendix J, Dissemination

Designing for Distance Learning ................. J1
Designing for Online Education

1. Identify the core content.
2. Focus on the content.
3. Explicitly outline students to be involved.

The following are some recommendations:

- Classroom teachers in this new environment.
  - What can the transition of an experienced
  - How to optimize education can be difficult.
any questions or concerns regarding this please feel free to get in touch with me.

Suggestion pertaining to putting essay on "Design Responsibly" to you for review. If you have
would definitely like to see this again. Oh by the way... Roger told me that he forwarded my
Remember that I am more than happy to assume the lead for position for your testing needs. I

Great piece of information for any designer to consider.

people understand what you are trying to display. Other than this idea, I think your work is a
myself, as sometimes overwhelmed by theory. All the theory in the world does not mean that
idea within your project, I feel that it will more likely be understood by people who, just like
you a good idea what I'm talking about. Although I'm not sure as to how you can apply this
images pertaining to Jan Tschichold's poster that I did in History of Design, I think this will give
actually use your theories. If you can remember how I broke down the supporting visual
class briefly evaluated. A simple way to do this is to create a link between the section where
you illustrate the theories and concepts used to evaluate graphic applications, to a screen that
potentional will be greatly enhanced if you include some example similar to the poster that our
Example of how theory can be applied: Therefore, I believe that the total information
understanding of theory is all-important, but at the same time, feel it is necessary to be exposed
wheeled by the vast amount of theory that I'm exposed to lately. I find myself always asking
say that it is designed very nicely, As a potential user and one who is considerably over-

Overall, I was really impressed with the precision of the information, and its presentation. Some

Re: Feedback on Presentation

To: Cliff Commanday

Erik Salmea
Research. Great presentation. The words seem to be a bit scattered within the circle. It can get confusing. However, it could be a little more organized. Different types of information design is helpful. Your circular diagram of the students, putting your materials on-line - make it accessible. Comments on Great Presentation of Information Graphics. Kerry A. Perkins
and so in our information age, technology:

want used to be around, quite profound

but that in the context. But the problem

theory and analysis. I'm not sure if you're making the

good, then I guess means you're wondering why

The only caution is that from my point

Investigations in disease (e.g., cancer) by...

It kind of goes to my view of how to see it?

2.2.2. It makes sense, but it was very understandable.

Let me formulate. His the rubbish matters, no

I thought the presentation was

CJ EF Command

presentation

CommCo's an

Alex R"apo
Just go faster!

Time to get into it and understand. Presentation and comprehensive ideas. Good topics, of course. Presentation contained a lot of information. Could be better understood with more time. 

Presentation was very clear and concise. Really like it.

Twentieth Century Information Design
I was very impressed with the presentation and felt it was very well presented. In fact, I think the content was quite interesting. I think that it thoroughly covered the material and was very well thought out. I think that the Cliff's Notes were very helpful in summarizing the main points. Overall, I think that the presentation was very well done and the Cliff's Notes were very helpful in summarizing the main points.
All roads to follow.

Learning curve is the acquired pace
for what will be a new introductory discipline. It appears that you have a solid foundation, all cues of information clearer. So far, it chart presents a comprehensive range of.

The thing map you handed out to this

Erin Fahring
A few thoughts on the current state of affairs...
If this is still possible to get it would be great.

I would have appreciated more randoms (such as the bread and
clearly it was very useful itself.

It was hard to absorb all of it, particularly since I thought it
lemon... but however there was so much information that

It was good, with the data and on building it down, what
they would have hoped. The approach we talked on the proposal
you couldn't find. We have been given, literally

I think it's presentation of the information, etc. An effective
communication and a guide to writing effective communication.

As communication is so important a clear section, the model
encouraging some more apparent conclusions and how to approach

The structure of the model is also a useful part in

of many aspects

In turn, what do you think the main thrust of this paper
The next map might well in turn

(If what amount of time, evaluation turned, etc.)
In my opinion, stresses for a more introductory understanding.

It's helpful if a few key points to make clear, this idea, rather
but because of the amount of information. The thing is, it would be
also criticised because presenting, the idea of making this to another
information processed. The thing put another until after

I thought this was a lot of stuff good and useful

Examination for Quiz:
Jennifer Perry

Dear [Name],

I hope this email finds you well and you're enjoying your summer break. It's nice to hear from you and your recent vacation to the beach. I hope you had a great time and made some wonderful memories.

I wanted to reach out to see how your coursework is going. I hear that the final exams are upcoming, so I wanted to offer any support or advice you might need. I remember that time when I was preparing for my exams, and I had some tips that might be helpful. First, try to create a study schedule and stick to it. Break your study sessions into manageable chunks to avoid burnout. Also, make sure to get enough rest and eat healthy meals to keep your brain functioning at its best.

If you need any additional resource or guidance, please let me know. I'm here to support you and help you succeed.

Best regards,

Jennifer Perry
Kara Hallahan

vast cliff's presentation was well planned and well executed. He was well spoken and well informed.

The concept and purpose of information graphics and the history of information graphics is hard to grasp. The presentation

made the theory whereby

which would stand out in our minds.
About trigon and its use in design.
Interesting to me, I hope to learn more.

Cliffs Presentation was informational and clear, and the function of theory was understandable.

To understand, the theory map was also

Program. Each new page was clear and easy

way in which his was setting up his computer

on theory was very helpful. I really liked the

Last week Cliffs Presentation

4/19/79

Guido Strano
organization on the computer.

To particularly enrich the layout and form into more comprehensive cleaning and improve the quality and integrity of your medical

It is important to keep things in clear vision and understand the information clearly. A change at

united and united at the presentation

since facade

community for us.
Good luck.

understanding it in public.

Some instructors should consider a

Your instructor can read much more information
come to that your module in much more
calling me. Just send me

Can you provide some more details on
the communication e-mail? That's what
The information in Greek, but I think it

The message could be better defined
I assumed in a clear attribution or if
Also, mentioning a title or affiliation could
am not familiar with. I'm not sure

I'm very interested by your information

16/3/1
the neoophiles to the design itself. Just a bit more helpful. Just to add an understanding for existence will suffice, would help to make the theory map.

reasons for it's existence and the purpose that it's the map, the theory.

I do wonder if an explanation of the theory map, the theory.

immense amount of research that was placed into the theory.

other than those few points, I feel that there was an

then point suppose and the eight point subheadings.

there is a strict inducting subjectivity between the plotted

theory map. Whether it's the presenter or not, I feel that

the theory map for just graphic design, the instead of a general

compressed into each section. But, I am looking at this as a

information contained within the map, that it is all

part of me wants to say that there is too much

map? Or are each title placed at random within the section?

there some inherent order to each section of the theory

confused by the subheadings and the eight point titles. Is

point size and either boldface or plain text. I am a bit

information. The fact that each heading is identified by the

I felt that the theory map is chock full of

Derek Shoates
There's your knowledge.

We're still having discussions on science in your class. I think it's very important to know about things such as theories and experimental observations. Your presentation was the misrepresentation of the only thing I noticed as a result in the text. I think you did a great job with...
Design History in Cyberspace: Twentieth Century Information Design
Course Development

Thinking About Information Design Module
Part One: Information Design Theory

*Theory Map Storyboard*

draft
1.30.97
Design History in Cyberspace: Twentieth Century Information Design
Course Development

Thinking About Information Design Module
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Theory Map Storyboard

draft
1.30.97
Design History in Cyberspace: Twentieth Century Information Design
Course Development

Thinking About Information Design Module
Part One: Information Design Theory

*Theory Map Storyboard 5*
Thinking About Information Design Module
Part One: Information Design Theory

Theory Map Storyboard

draft
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Thinking About Information Design Module
Part One: Information Design Theory

Theory Map Storyboard 8
draft 1:30:97
Design History in Cyberspace: Twentieth Century Information Design Course Development

Thinking About Information Design Module
Part One: Information Design Theory

Theory Map Storyboard

draft
1.30.97
Designing for Online Education