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

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Date 5/14/97
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 as the goals and objectives, was used to help plan the development of the thesis. (Please refer to Appendix A.)
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.
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)

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.
Theory Map

After theories were selected and organized into the Theory Matrix, alternate visual forms were tested in order to find the most effective visual organization and presentation format. At first, variations on a matrix format were tried, but yielded information correlations that were invalid. Since the form of a matrix did not seem to convey the information properly it was necessary to explore other formats. (Please refer to Appendix B.)

A variation on a semiotic tool of deconstruction was partially developed. (Please refer to Appendix B.) This tool was based upon the semiotic triad, with simpler terminology and an attempt to add positions extended from the base triangle for names of theories used in evaluating that corner of the triad. This evaluation model could also have served as a worksheet for students to complete as an evaluation tool within an assignment. However, the model proved to be complicated at this stage and other possibilities were explored.

The final form chosen was a circle, and the concept of a layered map was chosen rather than a matrix. The circle was effective in presenting the information in implied spatial relationships, as opposed to the rigidity of a cross-referenced matrix. The description of the circle as a map refers to the visual presentation of the information in positions that convey relationships based upon location and proximity.

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 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.
Implementation continued

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 on page 18)

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.<br>Alexey Brodovitch

>THEORIES ARE THE ETERNAL VERITIES.<br>Dr. John Ciampa
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<tr>
<th><strong>Glossary</strong></th>
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<tr>
<td><strong>chat</strong></td>
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<td><strong>client telecommunications software</strong></td>
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<td><strong>cyberspace</strong></td>
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<td><strong>distance education</strong></td>
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<td><strong>email</strong></td>
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<td><strong>gopher</strong></td>
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<td><strong>html</strong></td>
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<td><strong>http</strong></td>
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<td><strong>hypertext</strong></td>
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<td><strong>intelligence agents</strong></td>
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<td><strong>interactivity</strong></td>
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<td><strong>Glossary</strong> continued</td>
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<td><strong>multiple intelligences</strong></td>
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<td><strong>newsgroup</strong></td>
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<td><strong>pedagogy</strong></td>
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<td><strong>whole systems theory</strong></td>
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<tr>
<td><strong>world wide web (WWW)</strong></td>
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</tbody>
</table>
References: Internet

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Irvine, Hope

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

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

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Sterling, Bruce  

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available: http://ttt.media.mit.edu/pia/info.html

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>
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</thead>
<tbody>
<tr>
<td>to explore and gather information</td>
<td>to analyze the current state of online</td>
<td>gather, examine and categorize current</td>
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<tr>
<td>regarding interactivity</td>
<td>educational material</td>
<td>and past examples of educational material</td>
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<td></td>
<td>connected with electronic delivery systems</td>
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<td>(telecourses, distance learning programs)</td>
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<tr>
<td>gather, examine and categorize</td>
<td>to explore the relationship of information</td>
<td>gather relevant principles and theories from</td>
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<tr>
<td>the current state of internet</td>
<td>design principles to other fields of study</td>
<td>the fields of design and aesthetics,</td>
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<tr>
<td>technologies, with a specific focus</td>
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<td>communication, pedagogy, psychology,</td>
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<tr>
<td>on RIT's Office of Distance Learning</td>
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<td>human factors, technology and linguistics</td>
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<tr>
<td>goals</td>
<td>objectives</td>
<td>processes and strategies</td>
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<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>
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<td>draw from the field of human factors to assist defining physical characteristics of human/computer interaction</td>
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<td></td>
<td>to gauge the public perception of interactivity</td>
<td>utilize direct observation and questionnaires to survey the general public and design audience</td>
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<tr>
<td></td>
<td>to define interactivity</td>
<td>collect definitions from different sources (dictionaries, distance learning programs, and surveys)</td>
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<td></td>
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<td>create an appropriate composite definition</td>
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<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>
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<td>correlate the importance of teamwork in design with communication theories</td>
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<td>correlate theories of educational planning to the processes of graphic design</td>
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<td></td>
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<td>correlate theories of educational evaluation techniques to design evaluation techniques</td>
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<td>correlate whole systems theories to the creation of systematic designs</td>
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<td>correlate the theories of semiotics to message making in graphic design</td>
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<tr>
<td>goals</td>
<td>objectives</td>
<td>processes and strategies</td>
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<tr>
<td><strong>synthesis</strong> to create a practical application of online education to communicate the benefits of interdisciplinary study to graphic designers</td>
<td>to create a practical application of online education that applies the benefits of interactivity</td>
<td>utilize www page authoring tools, Macromedia Director multimedia authoring tool, and traditional print delivery systems</td>
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<td></td>
<td>to present a whole systems view of chosen fields of theory in relation to graphic design</td>
<td>present both macro and micro views of each field of study and associated theories</td>
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<td>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</td>
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<td>utilize methodology diagram as a navigational aid for application</td>
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<td>utilize correlations of design and theory as defined by research</td>
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<td>utilize examples of graphic design from RIT’s Graphic Design Archive, and from contemporary designers</td>
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<td>construct a whole systems view of media involved (media map)</td>
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</table>
### 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
- Create a questionnaire for the users of the module
- To evaluate the effectiveness of the module within the context of the supporting course
<table>
<thead>
<tr>
<th>goals</th>
<th>objectives</th>
<th>processes and strategies</th>
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<tr>
<td>to communicate through authorship the</td>
<td>to write articles for design and technology oriented publications that</td>
<td>write a series of articles focusing on individual fields of theory and</td>
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<tr>
<td>findings of my research on interactivity</td>
<td>communicate the benefits outlined through my research</td>
<td>their relationship and benefits to the field of graphic design</td>
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<tr>
<td>to the professional and educational</td>
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<td>create a series of articles that address different audiences,</td>
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<tr>
<td>societies of designers.</td>
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<td>through presentations of different depths of content and different</td>
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<td>writing styles</td>
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</table>
**Methodology**

**Diagram**

**Interactive design: a multidisciplinary theoretical perspective**

- **Information design**
  - Theory
    - Communication theories
    - Pedagogical theories
    - Psychological theories
    - Design theories
  - Design pragmatics
    - Delivery systems
    - Pragmatics

- **Design history in cyberspace**
  - Twentieth century information design
    - Traditional and nontraditional teaching delivery systems
    - Design archive online module
    - Anatomy of information design module

**Interactivity**: A working definition: of or involving a mode of operation in which there is a reciprocal activity of exchange between user and computer.
Appendix B, Thesis Development

Theory Matrix ................. .............. B1
Semiotic Evaluation Model ...... .............. B2
<table>
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<th>universal</th>
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<td><strong>Theory Matrix</strong></td>
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<td>(rudolph, arnheim)</td>
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<td>(zakia)</td>
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<td><strong>interdisciplinary experience</strong></td>
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<td>(irvine)</td>
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<td><strong>whole systems theory</strong></td>
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<td><strong>designer as information architect</strong></td>
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<td><strong>information theory</strong></td>
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<td>(tufte, wurman)</td>
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<td><strong>methods of evaluation theories</strong></td>
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<td><strong>human factors/ergonomics</strong></td>
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<td><strong>contrarian theory</strong></td>
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<td>(tschichold/moyer/bauhaus)</td>
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<td><strong>intelligence agents</strong></td>
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</table>

**Note:** The table contains various theoretical and conceptual frameworks related to design, education, and technology, organized under the headings of universal and specific theories.
Semiotic Evaluation Model

Linguistics

Typography

SWS Journalism

Semiotics

Message Analysis

Personal Reaction

Visual Analysis

Typography

Modernism

How clear are the elements

How does the type flow

Clifford M. Commanday

1997

draft
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
this is sample text. this is sample text. this is sample text. this is sample text. this is sample text. this is sample text.
Final Application Screen Shots

Netscape: Module Four: Evaluating Information Design

20th Century
Information Design

Module Four
Evaluating Information Design
**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 Gréffe
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.

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.

Krishnamurti
Education and the
Significance of Life

Erik Spiekerman
MetaDesign
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.
Evaluating Information Design

Macro View: Theories that Inform

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, Alexey 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?

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>Course</strong></td>
</tr>
<tr>
<td><strong>Fall Quarter Starts</strong></td>
</tr>
<tr>
<td><strong>September</strong></td>
</tr>
<tr>
<td>course materials mailed</td>
</tr>
<tr>
<td>course material in bookstore</td>
</tr>
<tr>
<td>one-on-one meeting</td>
</tr>
<tr>
<td>orientation mailing</td>
</tr>
<tr>
<td>final production</td>
</tr>
<tr>
<td>course material compilation - print, digital, video</td>
</tr>
<tr>
<td><strong>JULY</strong></td>
</tr>
<tr>
<td>course materials modifications</td>
</tr>
<tr>
<td><strong>JUNE</strong></td>
</tr>
<tr>
<td>HR/HR's summer class</td>
</tr>
<tr>
<td>SF cataloging DOL</td>
</tr>
<tr>
<td>potential development of surrounding web site</td>
</tr>
<tr>
<td>DOL prototype review</td>
</tr>
<tr>
<td>group discussion of DOL course assignments</td>
</tr>
<tr>
<td>thesis modules completed (CC+VR)</td>
</tr>
<tr>
<td><strong>MAY</strong></td>
</tr>
<tr>
<td>assess HR/HR's content needs in full course</td>
</tr>
<tr>
<td>HR/HR available: May 26-30, June 2-6, 23-30, July 1-15</td>
</tr>
<tr>
<td>video production/editing - building (CC) HR/HR course(?)</td>
</tr>
<tr>
<td>HR/HR+CC design form for potential video presentation of module 4</td>
</tr>
<tr>
<td>weekly meetings begin: register class (CC+HR)</td>
</tr>
<tr>
<td>first class workshop</td>
</tr>
<tr>
<td><strong>APRIL</strong></td>
</tr>
<tr>
<td><strong>March 9, 97</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Course Development</strong></td>
</tr>
</tbody>
</table>
Environment: The course outline for the course skills.

Post Your Essay to the Module Four Conference in the First Class Software.

Comprehensive or not well presented. This will be done in the First Class Software.

Part One:

Environment: The course outline for the course skills.

Post Your Essay to the Module Four Conference in the First Class Software.

Comprehensive or not well presented. This will be done in the First Class Software.

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Environment: The course outline for the course skills.

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Part One:
Appendix G, Thesis Evaluation
Appendix H, Thesis Show

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

Clifford M Commanday
# Project Description

## Thesis Introduction

This thesis focuses on the integration of communication design in the field of education and learning, with a particular emphasis on the role of information design in the learning process.

## Situation Analysis

- Information design has become an integral aspect of contemporary communication, particularly in the context of distance learning.
- The era of digital technology has fundamentally changed the way information is designed, delivered, and received.

## Research Objectives

- Examine the evolution of communication design in the context of distance learning.
- Investigate the role of information design in enhancing learning outcomes.
- Develop a framework for integrated information design.

## Research Methods

- A combination of qualitative and quantitative research methods, including surveys, interviews, and case studies.
- Use of a literature review to contextualize the findings within the field of communication design.

## Distance Learning

- The advent of digital technology has transformed the landscape of distance learning.
- The use of online platforms for teaching and learning has become widespread.

## Communication and Technology

- The integration of communication and technology is essential for effective distance learning.
- Technologies such as multimedia, virtual reality, and interactive tools are crucial.

## Synthesis

- The synthesis of communication and technology in distance learning opens up new possibilities.
- The future of education is deeply intertwined with communication design.

## Theory Matrix

| Theory Matrix | Communication and Design | Distance Learning | Technology Integration | Design 

### Project Description

<table>
<thead>
<tr>
<th>Thesis Introduction</th>
<th>Situation Analysis</th>
<th>Research Objectives</th>
<th>Research Methods</th>
<th>Distance Learning</th>
<th>Communication and Technology</th>
<th>Synthesis</th>
<th>Theory Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>This thesis focuses on the integration of communication design in the field of education and learning, with a particular emphasis on the role of information design in the learning process.</td>
<td>Information design has become an integral aspect of contemporary communication, particularly in the context of distance learning. The era of digital technology has fundamentally changed the way information is designed, delivered, and received.</td>
<td>A combination of qualitative and quantitative research methods, including surveys, interviews, and case studies.</td>
<td>The advent of digital technology has transformed the landscape of distance learning.</td>
<td>The integration of communication and technology is essential for effective distance learning. Technologies such as multimedia, virtual reality, and interactive tools are crucial.</td>
<td>The synthesis of communication and technology in distance learning opens up new possibilities. The future of education is deeply intertwined with communication design.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Ideation

Transition from Theory Model to Theory Map

Potential Branch and Sequence for Theory Map
As an interdisciplinary project, the module was presented to a class of RIT graphic design students. These students represented an audience true to the intended learning environment. While the evaluation responses consistently expressed interest in the content, they also indicated a need for simplicity, which understanding of the audience guided the completion of the module.

This course is mandatory for anyone who aspires to pursue design, props, and stage management expertise. While it offers a comprehensive overview of RIT's offerings, it is designed specifically for students interested in design, art, photography, and film. This course will introduce users to a variety of design, photography, film, and video media and is based on course modules from the

The Center for Digital Media at RIT offers a unique curriculum that combines creative and technical skills in an environment designed to develop and deliver high-quality distance learning programs. The interdisciplinary nature of the course content is evident in the workplace, where digital media is used to convey information and to engage users in various contexts. The course content is designed to be relevant and comprehensive, and it is intended to be a valuable resource for students in creative programs such as design, art, photography, and film. Additionally, the course content is designed to be accessible to professionals in a variety of fields, including design, history of art, and media studies. The course is crafted to provide a comprehensive overview of the field, with a focus on the latest developments in digital media and technology.
Appendix I

Interdisciplinary Diagram

..................................II
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

Dissemination J, 3rd 3rd

The purpose of modular units is to break down large amounts of content into smaller, more manageable modules. The goal is to make learning more accessible and engaging for students. Each module focuses on a specific topic and is designed to be completed in a set amount of time. This approach allows students to learn at their own pace and ensures that they have a strong foundation before moving on to the next module.
Any questions or concerns regarding this please feel free to get in touch with me.

Suggestion pertaining to putting essay on "Design Responsibility" 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 if at 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

But me, are sometimes overwhelmed by theory. All the theory in the world does not mean that

me, I feel that it will be more likely to be understood by people who, just like
theory within your project. I feel that it will be more likely to be understood by people who, just like

you a good idea what I'm talking about. Although I'm not quite so to how you can apply this
images pertaining to John Tschichold's paper that I did in History of Design. I think this will give
actively 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
potential will be greatly enhanced if you include some examples similar to the poster that our
potential will be greatly enhanced if you include some examples similar to the poster that our

original one simple question. How can we use this information to learn. I think developing a good
seems like a little crowded but other than a little confusion stemming from that I would

say that it is designed very nicely. As a potential user and one who is considering over-

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

Re: Feedback on Presentation

To: Clll Commanday

Erik Salmea
Research. Great presentation. The circle. It can get confusing. Thorough. The words seem to be a bit scattered within. However, it could be a little more organized. Different types of information design is helpful. Different diagrams to the students. Your circular diagram of the putting your materials on-line - make it accessible. Was very insightful. I really enjoyed the idea of putting your materials on-line. Your research on theories of information design is helpful. Comments on the final presentation.

Information Graphics

Terry A. Perkins
Jane Miller:

Where you asked in the question, I've been in the office and I would love to help. I was just on a break, and if I could be of service, I have heard about the issue you've mentioned. For more information, you can visit our website or contact us directly. Thank you for reaching out.
and ze in all the information was helpful.

went well and the sessions were prepared.

But the presentation was not very clear.

The only advantage is that it was very informative.

The subject matter was not very understandable.

I thought the presentation was a lot to grasp, but it was very understandable.

The only advantage is that it was very informative.

The subject matter was not very understandable.

I thought the presentation was a lot to grasp, but it was very understandable.

The only advantage is that it was very informative.
I don't have enough information to answer this question.
Just got feet wet. 

Time to get into it. I can understand. Presentation and communicated ideas. Good topics. For a course, presentation contained a lot of information. 

Presentation was very clear and concise. Really.
Presentation was very good.

I like your talk. On all, Class.

We found it fascinating how you could inform the audience about the importance of aligning with the group. I also noticed a couple of factual figures that were

very informative. Later, we found a need for Cliff's presentation.

Thanks, Raghu.
all roads to follow.

Learning curve: The acquirend paper for what will be a new institution's director,
approach that you have a solid foundation of still and now.
Class produces a constructive exercise of classes.

The thing may you hard out to this.

Evelyn Fothering
think about the above.

In the context of your project, which is described in our previous discussion, the selection of data can be made more broadly. However, you will need to understand the data to understand what it represents and how it could be used. The theory underpinning the need for data and information is important, and you referred to the information concept.

4/14/77

[Signature]
If this is still possible to get it would be great.

The brainstorm down short (poster example) to help as a reference.

I would have appreciated more randoms such as the head and a
was very useful later.

It was hard to absorb all of it, practically. Since, I thought of
however there was so much information that
well good, off the bat. And on the building it down, and
they would have helped. The main thing would be to have been open, limit

triggered. production and interaction seems to represent the

production is to ensure effective communication.

encouraging some more relevant and clear, and more to appear.

encouraging some more relevant and clear, and more to appear.

The sentence clearly made it also a useful tool in

of many aspects.

First, a brain map would help. The scientific map would well in circle

First, a brain map would help. The scientific map would well in circle

in fortunate structure for a new introductory understanding.

helped me a lot. They had a clear view of the idea. After

helped me a lot. They had a clear view of the idea. After

and chestnut thought provoking. The newly thought to another

and chestnut thought provoking. The newly thought to another

information. Provided. The theory another view originally

I thought your were for surely good and major

Evaluation: 4/5
I thought the lecture last week was good and the handouts were very helpful. There was one thing I thought you could put on your chart is philosophy and how it relates to design. I find it helps me look at my work in a different way and also helps you learn to critique your work and voice your opinion (right or wrong) about things.

Jennifer Bowers
The concept and purpose of information graphics and the history of information graphics is hard to grasp. The presentation was well planned and well executed. He was well spoken and well informed. The theory, which would stand out in our minds.
Last week Cliffs presentation on Theory was very helpful. I really liked the way in which he was setting up his computer program. Each new page was clear and easy to understand. The theory map was also clear, and the portion of Theory was informational, and interesting to me. I hope to learn more about theory and its use in design.
organization on the computer.

A particularly helpful tip I hoped and

and move into more comprehensive clean-

 items and might simplify your medical

 it is important to keep things in cleaning.


under the information clean. A change to

and it began to shape clearly the chapter

a volume unhelped the presentation

same phase

commentary for self
Good luck,

[Signature]

2/3/17

I'm very interested in your information.
I do wonder if an explanation of the theory map, the

I wonder if an explanation of the theory map, the

I wonder if an explanation of the theory map, the

I wonder if an explanation of the theory map, the

I wonder if an explanation of the theory map, the

Derek Shoates

Derek Shoates
love, Caroline.

Here's your password:

we're all looking forward to seeing the final results and interpretations. I think you did a nice job.

The only thing I noticed is a typo in the presentation was the misinterpretation of things such as theories for graphic organizers. It is very important to know about your presentations on theory in design. I feel 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
Part One: Information Design Theory

Theory Map Storyboard

1.30.97
Thinking About Information Design Module
Part One: Information Design Theory

Theory Map Storyboard 5
draft 1.30.97
Thinking About Information Design Module
Part One: Information Design Theory

Theory Map Storyboard 7
Design History in Cyberspace: Twentieth Century Information Design
Course Development

Thinking About Information Design Module
Part One: Information Design Theory

Theory Map Storyboard 8
Thinking About Information Design Module
Part One: Information Design Theory

Theory Map Storyboard 9
Thinking About Information Design Module
Part One: Information Design Theory

Theory Map Storyboard 11

draft 1.30.97
Designing for Online Education

1. Explicitly require students to pass the course.
2. Keep primary focus on the content.
3. Structure the online course as a series of modular units that are heterogeneous and flexible. Consider using a variety of media and interactive elements.

Design Modularity

1. Define the learning goals and objectives.
2. Create a modular structure.
3. Ensure that each module is self-contained.

4. Align the learning goals and objectives with the online course.
5. Ensure that the content is relevant and engaging.
6. Use a variety of media and interactive elements.

Online Education can offer opportunities for new and innovative approaches to education. The transition from traditional to online education can be a difficult one,

Dissemination

The majority of the research and development in the field of online education has focused on the development of technology to support the delivery of content. However, there is a growing recognition that the success of online education depends on more than just the technology. Effective online teaching requires a deep understanding of how students learn and how to create engaging and interactive learning experiences.