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Storytelling and the personalization of information

A way to teach user-based information design

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Students often initially encounter the idea of information design with the preconceived notion that information design is dry and impersonal. To counter this attitude, the author stressed to students that information design is about making information personal (and thus accessible) and instructed students to approach their information design tasks from the point of view of storytelling. Through examples of student projects – forms, maps, and instructions – the author describes how students combined their own reactions to the forms, maps and instructions (i.e., their own stories of encountering the material) with analyses of the visual and verbal characteristics of those information documents (the information's story) as the basis for developing creating user-based designs.

Introduction

My graphic design students often initially encounter the prospect of information design with the preconceived notion that information design is dry and impersonal. Part of that reaction is due to their immersion in American pop culture with its 'flash and splash' visual effects. Part is the misconception that design forces you to hold back your own 'artistic' voice and 'do what the client wants.' But a big part of that reaction derives from students' own experience with information design. By the time they reach college, students have had to cope with plenty of examples of wretched information design produced with the mistaken beliefs that simplicity and brevity equals efficiency, that 'easy to read' equals capital letters or bold type or big type, that illustration means a black-and-white line drawing with little variation in line weight, and that design for 'the masses' means dumbed down design. After experiencing poorly worded and confusing forms, maps that are cluttered with extraneous visual material, and instructions that are filled with jargon and virtually impossible to follow, it is no wonder that students would see learning about information design as tedious and something to be only be endured. To counter this attitude, I have used storytelling as a way to introduce students to the idea that information design is actually about making information personal. This paper, through sample projects and examples of student work, demonstrates how storytelling can be employed to teach user-based information design and to make information design meaningful for both designer and user.

Storytelling and personal experience

Storytelling is the recounting of our experiences: observations, feelings, thoughts, and imaginings. Stories are a means

of 'organizing our experiences' (Dyson and Genishi, 1994, p. 2); through the telling of stories we acknowledge those experiences, share our interpretation of those experiences, and discover commonalities and differences between our experiences and the experiences of others. On a grand scale, storytelling is the essence of the oral tradition that uses stories to pass along a people's cultural experiences and teachings, tying individuals' experiences to a shared heritage. On a more intimate scale, personal storytelling happens as we share the events and concerns of our day-to-day lives with our families and friends. Through this conversational, personal storytelling, we claim and validate our own experiences, 'us[ing] narrative to shape and re-shape [our] lives, imagining what could have or should have happened, as well as what did happen.' (Dyson and Genishi, 1994, p. 2) Acknowledging that these two types of storytelling intersect at various levels – cultural experience being rooted in individual experience and cultural heritage providing the context for individual experience – students were asked to use conversational or personal storytelling in developing information design. As you will see, personal storytelling allowed them to draw upon their personal experience, which provided a for base their strategies in designing forms, maps, and instructions.

The choice of projects is a critical aspect of breaking through the notion that information design is impersonal. By selecting projects with which the students are personally familiar, the information and the user can no longer be thought of abstract and hypothetical but very real. I assigned two projects that tapped into their experiences as WSU students – one in form design and one in mapping. A third assignment – instruction design – was based on an object of each students' own choosing. Students were asked to rework the 'Registration Schedule Authorization' form that they use to add or drop classes from their schedule, and to design a map (integrated into a brochure) for the Department of Art and Art History (the students' academic home). The map and brochure, for new students and visitors, were to locate the four buildings used by the Department and the disciplines within each building. The instructional design assignment was part of an interrelated set of designs – logo/identity, instructions, and package – for an object in which the student must already have had an interest that 'did something,' (i.e., perform a task). Through working with items that already were in their sphere of experience as users, students began to realize that their connection to information design is very personal, that it touches them directly, and that they, as users, have a stake in the integrity of the design. Their personal responses to the information – their stories – affected their choices of words, typographic signaling, images, as well as the sequence and pace of the information. By using their own stories to shape information design, students 'become one and at the same time narrated selves, who can tell the story of their own lives, and [as] narrating selves, who share interpretation with others.' (Dyson and Genishi, 1994, p. 2)

The stories: Each student's story

The first step in this design process was for each student to tell his/her story, that is, his/her response to the information and the design of the form or the map or the instructions. What are you being asked to do? Do you know how to use this piece of information design? How do you know what to do? What is clear and what do you have guess at? What do you need to do first, second, third and so on? How do you process what you encounter, both in terms of content and format? What do you stumble over and why? To make this information work for you or make sense to you, what do you have to mentally readjust (i.e., add, delete, or rearrange)? If you could change anything about how it reads or looks, what would that (or those) be? What do you like or not like about using this form, map or set of instructions? The answers to these and many other questions became the students' stories. After recording their reactions – their stories, the students then began the

research into the form, map or instructions and completed a verbal and visual analysis of that information design piece. From this research and analysis, the students heard the story of the information itself.

The stories: The information's story

As designers, the students actually worked with two stories – their own story of encountering information and the story of the information itself. The information had a purpose, a story, and it was the responsibility of the student to tell that story, too. This was where the research and analysis of the information and its visual presentation were essential. Research into the information asks questions like, What is the point of the information? Why does it exist? How, when, where, and by whom is it used? What sequence of steps is needed to extract the information? An in-depth analysis of the verbal and visual components of an information design document that already exists, such as the university add/drop form and the object's instructions, should include such questions as, What words are used? What is the tone of the voice of the words? Are they sentences or phrases? What is the category of information? How many colors are used? What kind of alignments and thresholds are there? What about the use of rules, boxes, outlines? Size, weight, slope and face of type? Use of space? Line length? In the case of a new design, an analysis of similar items examines the effectiveness of those documents. For the design of the Department map, which does not exist, students collected a variety of maps (including the official campus map) analyzed the effectiveness of maps' communication. After reading Edward Tufte's book *Envisioning Information* they then examined the maps again, this time commenting on various examples of 'chart junk' and whether the maps used any of his concepts of small multiples, layering and separation, etc.

The stories: Student's story + information's story

As the students went through the analysis, they began to see how they could use their personal stories to enable the information's story to be better understood. The students wove the two stories together in such a way that their experiences with the information shaped or interpreted the information and the visual design of the information. They used their own stories to personalize the information and its design in order to make the information both more meaningful and more accessible for others. As Ruth Finnegan states in her book, *Literacy and Orality: Studies in the Technology of Communication*, 'Individual storytellers impress their own personalities on the content and presentation of a story.' (Finnegan, 1988, p. 91)

Form design project

The first example of a project that illustrates the use of storytelling in the development of information design is the WSU Registration Schedule Authorization form (Figure 1). This form is required to be submitted by a student if she or he decides to add or drop a class after registration is over, wants to be admitted to a class that is already full (an override), or wants to attend a class whose enrollment is afforded only by 'consent of instructor'. As students told of their initial experiences with this form, they mentioned the following problems. How do I fill it out? What is a call number? Where do I find out the section number? What do the codes mean? Do I fill out the form or does my instructor? Who really needs to sign this form? Am I the one to contact all these people for their signatures or do I hand it in somewhere and it gets passed along?

After writing their own narratives about their experiences and listing problems, questions, and positive points about the form and its contents, the students then did a general and a detailed analysis of the verbal and visual qualities of the form in its current state. Each student

Figure 1. The Wayne State University Registration Schedule Authorization form.

wrote his or her individual analysis and then pooled that analysis with those of the other students. This way, all the students had as much of the information's story as possible. For ease of reference and consistency of analysis, they started at the top left of the form and worked across and then down. The general analysis of the whole form is provided in Table 1.

The WSU Registrar talked with students during one class period and helped flesh out the form's story. She described the purpose of the form, the meaning and importance of the codes, how the form is processed and stored, and that the staff cross-references the course change and student information areas when processing the form. Through her commentary, she answered some of the questions that had arisen from the students' own experiences. The two stories were beginning to weave together.

In their redesigns (Figure 2 and Figure 3), the students made sure that filling out the form was clearly explained for all who had to use it. Through their designs, they took the mystery out of the course information categories and of the codes by explaining their meaning and use. They clarified the use of signatures – that instructor signatures go next to the course data and that there is a sequence of other required signatures. They eliminated the heavy outlined boxes and kept the visual elements focused on the information itself. Rules and type were logically integrated with the use of space, threshold, size, and weight.

One student (Tracy Wendt, Figure 2), said that she had always wanted someone to tell her how to fill out the course information area and never knew what the codes stood for or how they related to the course information. Her design solution was to clearly explain the relationship between the bits of information and then provide an example – handwritten, as a student would do it – of how to fill in the required spaces. The respective codes and their users were clearly indicated through rewording, color, and numbers. She choose a horizontal format because the forms are stored in horizontal hanging files and the horizontal orientation would mean one less step – turning from horizontal to vertical – for the registrar's staff. And she placed the student and course information sections close together so that staff could easily look back and forth between the sections. Another student (Margaret Liskow, Figure 3) chose to provide an example of how to fill in the

Table 1. WSU Registration Schedule Authorization Form (Add/Drop Form).

General analysis – Whole Form

Verbal (grammar ad content)	**Visual** (appearance)
– uses short phrases or single words – uses one complete sentence form	1. printed in two colors – green and red – red used for complete sentence at top of and at bottom for codes – green used for all other items
– uses abbreviations	2. 4 sections – top ('fill in the blanks') – middle (grided boxes) – bottom (check boxes, signatures), codes box (box and copy distribution) 3. information to be filled in over 1 pt. rules, except for grided boxes (outlines 6 or 8 pt. rules, grid lines 1 pt rules) 4. use of columns and thresholds varies throughout form

Figure 2. Redesign of the form by Trace Wendt.

course information grid but additionally simplified the code explanations. She also decided that since she, like most everyone else at WSU, refers to this as the 'add/drop from', that she would rename it to conform to common usage. Feeling that scholarship money is a vital issue in the life of a student, she reworded and clarified the financial aid statement.

Map design project

The second example of storytelling at work is the mapping project. This assignment dealt with the locating the buildings used by the WSU Department of Art and Art History and the various disciplines (sculpture, painting, industrial design, etc.) within the buildings and was

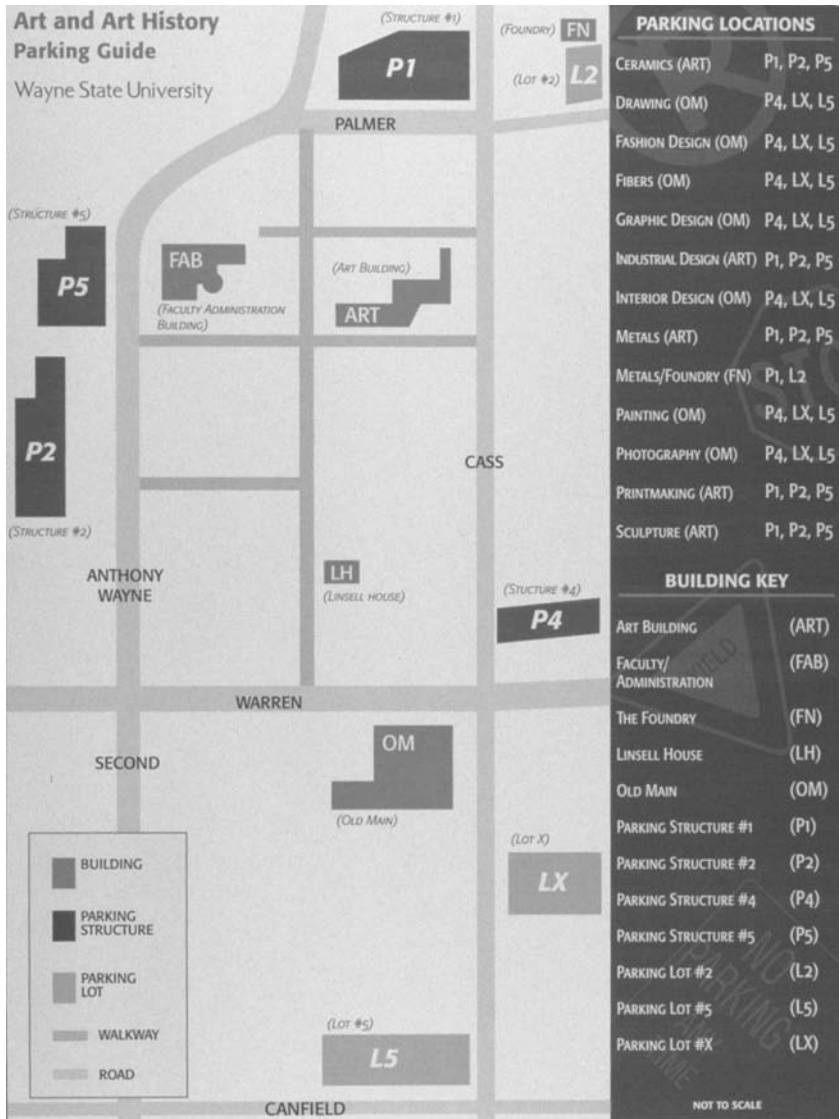**Figure 3.** Redesign of the form by Margaret Liskow.

Figure 4. Map design by Jerry Karpuik.

aimed at new and prospective students. There is no Department map so this project constituted a new project. Students told stories of how they navigate through and around campus – the problems, the shortcuts, the strategies – and of their own experiences as a new student on campus. They often said, 'This is what I wish I had known then'. The students did a verbal and visual analysis of several maps, most of which contained lots of 'chart junk' – a map of Chicago in which street names are obscured by business logos and Lake Michigan becomes a water park of advertisements; a floor plan of the Metropolitan Museum of Art in New York traversed by unexplained dotted lines; and a couple of WSU maps that contained gratuitous icons, lacked layering and separation, used typography that was difficult to read, and sported a visually overpowering ornate compass.

WSU is a largely a commuter campus, meaning that most of its 35,000 students drive to school and must cope with the challenge of parking. For one student, the parking issue became the focus of his design (Figure 4). He told of needing to know the location of parking spots in relationship to the location of his classes. He had classes in all four of the Department buildings and had figured out the most strategic parking spots for easy access to each building. This strategy became his rationale for listing the Department's disciplines according to building and nearest parking facility. His map only showed the Department's buildings, the parking structures and lots, and the streets; places such as restaurants, bookstores and other university buildings were not on his radar. He even named his map the Department's 'Student Parking Guide'. And, from his own experience, he knew that there are certain fees and procedures are associated with parking at WSU. Therefore, he included that information on a panel of the brochure, knowing that finding a place to park was only half the battle.
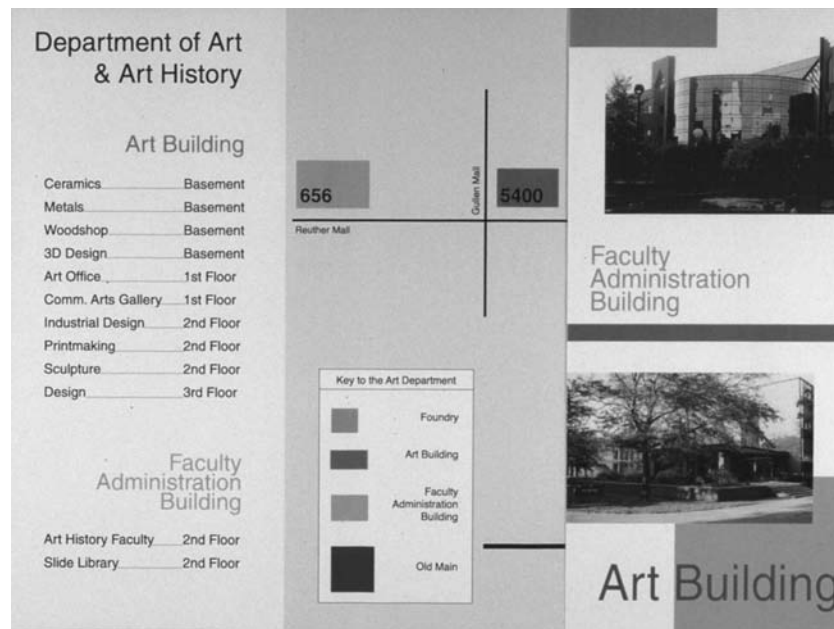

Figure 5. Map design by Maryanne Wessels.

The story of another student, who was new to campus, centered on the fact that the Department's facilities were scatted across campus and that she needed to associate addresses with the actual buildings (Figure 5). She focused on the street addresses and the appearance of the buildings. The cover represents the four color-coded buildings and the gatefold interior shows images of the exterior of the buildings. When each side of the gatefold is opened, the viewer sees the portion of the map with two of the buildings and the opposite panel of corresponding images, addresses, and disciplines of those buildings. Yet another student's story told of how much his visual studies meant to him, that when he thought of the Department's buildings, he thought of them as places that housed artists and designers who were creating wonderful, intriguing contemporary work (Figure 6). Thus he represented the buildings in his map through circular photographs of 'artistic' details and created a corresponding visual icon for each building.

Instruction design project

The third example, the instruction assignment, is based on an object of each student's choosing. The object had to come with operating instructions, which the student was to analyze and redesign. One of the most unusual items selected was an alternator for a car. The student had helped her dad work on cars for many years and knew that changing an alternator – which supplies the electrical charge to the battery – was really not that difficult. However, someone starting out as a do-it-yourself mechanic would not know the terminology of the engine parts, the sequence of steps to install an alternator, or what dangers there might
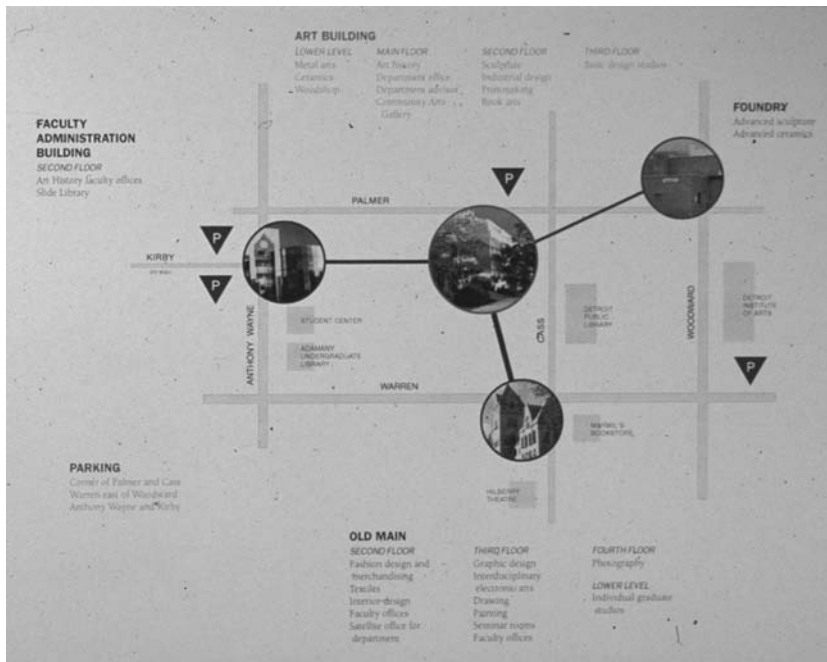

Figure 6. Map design by David Myer.

be. The other important thing to know was the kind of alternator needed for the car; not all V-6 engines are the same. In her analysis of the instructions that came with the alternator, the student noted that the instructions for installing a new alternator were completely verbal and filled with warnings and cautions; in fact, the dominant visual element was the large word 'Warning!' in black capital letters, surrounded by a fade of red-orange. The procedure for installation was dwarfed by the warning and several 'cautions' and 'tips,' set in capital letters and outlined in boxes. She felt that while the warnings, cautions, and tips were important, that they made the installation of the alternator seem scary and daunting. Her design, therefore, eliminated all of the ominous warnings, cautions, and tips and instead incorporated them into the sequence of the instructions (Figures 7 and 8). She added photographs
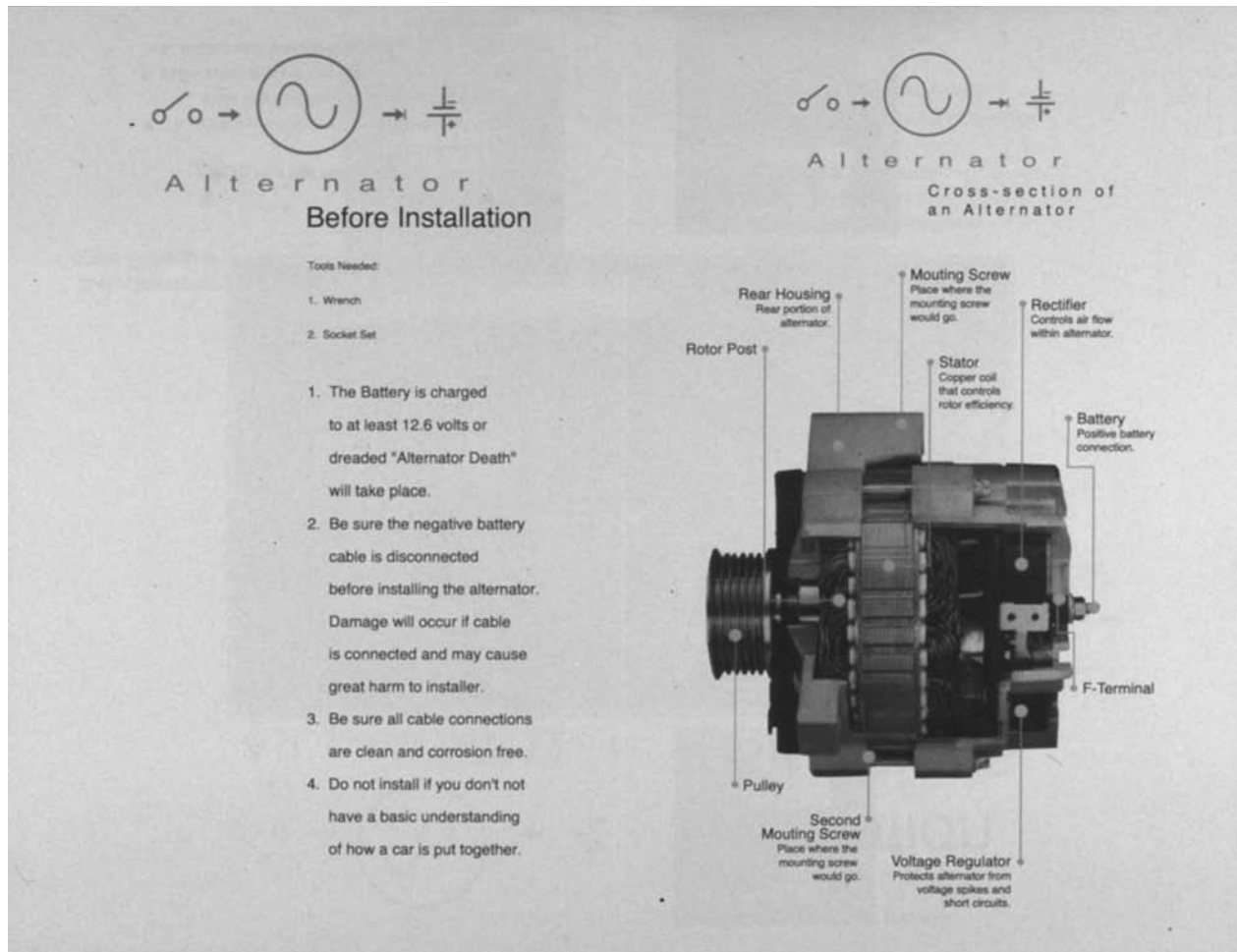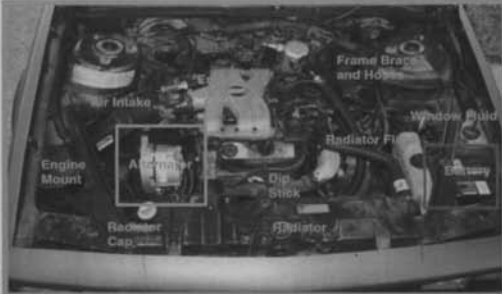

Figure 7.   Engine parts ID. Instruction design by Maryanne Wessels.

Figure 8. Installation instructions page. Instruction design by Maryanne Wessels.

to make a connection between the words of instruction and the 'reality' of the car itself. Her finished set of instructions provided a cover that clearly stated the kind of engine that took this particular alternator, then opened to a double-page spread of a list of items and issues to deal with before installation, with a photograph of the profile of an engine that identified parts related to the installation (Figure 7). It finally unfolded to a step-by-step installation procedure (complete with under the hood photos) in which the cautions and tips became bulleted items under their respective steps (Figure 8). Through her story, her own empirical experience, she personalized the story of the alternator installation into a design strategy that enables another person to readily use these instructions.

Conclusion

In all of the above instances, the students became truly engaged with the information design projects. The assignments gave the students 'permission' to validate their individual experiences as users of information, and personalized the content of the information for them. As they worked on their designs, the students expressed keen empathy for others who would encounter the information contained in the form, map or instructions. The quality of thinking, the attention to detail, and the variety of solutions that students demonstrated in each of these projects was noticeably better than usual. In response to the students' designs for the WSU Registration Schedule Authorization form, the university Registrar incorporated aspects of the students' design – use of a sample entry, clarification of codes, and identification of the form as 'Add/Drop' – into successive iterations of that form. It is no surprise to me that students, in their end-of-term evaluations, said that the information design project had been their most important project. They said they 'could really get into it,' that they could now 'see things differently,' that it

was 'a cool project,' and that it made them feel like they could make a difference through design. And that, after all, is the point.

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Judith A. Moldenhauer is an Associate Professor and the Area Coordinator for the Graphic Design program at Wayne State University in Detroit, Michigan, USA. Her professional work includes designs for several exhibitions at the Detroit Institute of Arts and educational materials for *Healthy Start*, a U.S. government program to reduce high infant mortality. Ms. Moldenhauer has made presented papers on information design at several conferences including Vision Plus 5, Infodesign ed 2002, and the International Congress on Women's Health Issues (ICOWHI). She and a sociologist colleague in Turkey have authored papers for ICOWHI and the International Sociological Association on the design of information, products and space in maternity settings in Turkish hospitals. As a co-principal investigator for a U.S. Department of Education FIPSE grant, 'Seeing the Body Elsewise: Connecting the Pre-Health Sciences and the Humanities', she taught the course, 'Information Design and Visualizing the Human Body – Mapping the Human Body', that examines how the human body and its functions have been visualized through time and across cultures, and the social implications of those visualizations.
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