Learning from the Ordinary: The Urban Vernacular and the Early-Major Student in CSI-Arch

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Problem and Objectives:

Formal architectural education rarely gives students opportunities to learn to use their lived-experiences in the classroom. This paper examines how Architecture 253: Social and Cultural Issues in Architecture, a 90-student, required, second year, early-major class in the new 4+2 Masters of Architecture program at Ball State University attempted to bridge this gap between lived reality and classroom activities by helping students translate life experiences into design knowledge and design strategies in ways that was both personally relevant to them and applicable to the design process. [1] This was achieved by the following strategies:

1. Teaching students expert ways of seeing and evaluating the built environment and using that skill in the design studio to analyze case-studies.

2. Developing a vocabulary of expert terms used during the design process.

3. Using the above skill to document, evaluate, and understand their familiar environment.

4. Giving students an ability to transfer this knowledge in the design studio in a structured way.

Since the sixties few architecture schools developed courses where students were introduced to ways of deciphering and understanding social and cultural issues. Early on these courses were categorized as Environment Behavior courses or Social Factors courses. By the late 1990s many architecture schools had dropped these courses from their curriculum, substituting them with architectural history or cultural landscape courses.[2] One of the common problems with courses that dealt with social and cultural issues in the built environment was that students found it difficult to translate the knowledge into design practice.

But these courses are relevant. Architects educated in American colleges will confront a global world where they will need to be aware and respectful of cultural, social, and political differences. Yet architecture continues to emphasize technical and esthetic concerns at the expense of a theoretically informed, methodologically rigorous ways of understanding culture. Early-major (undergraduate) architecture students in this class found it difficult to read socio-cultural cues embedded in the physical world around them. Many of them expected that the course will be a expanded version of National Geographic TV, or their high school cultures class where they learn to respect difference: how the Vietnamese rice farmer and the Kalahari natives from traditional cultures differed from the modern American - a generalization that ignores the reality of a globalized world and a view that has been successfully critiqued by cultural studies scholars.[3]

This class instead urged students to understand culture by first observing, reading, documenting, and analyzing the social and cultural cues in the built environment around them. By changing the geographical and

historical students saw difference AND continuities. Instead of culture becoming a code-word for practices and activities different from them, it was expected that students will gain a more sophisticated understanding of the term.

The content material was delivered through interactive in-class workshops and small-group and large-group discussions (rather than solely through lectures). Active engagement of students was encouraged – although as I will discuss later, the expectations of the students for a lecture-based class – the traditional sit back and relax format – and their overemphasis on the studio as the prime learning space created difficult problems that will require strategic changes next time this course is taught.

In order to help transfer knowledge and apply it to different contexts the students were first introduced to systematic methods of analysis and documentation of the built environment. Second, they were given problems that worked as triggers to operationalize the above skills and help students transfer environmental information and create useful knowledge. Finally the studio works of the select students were monitored to see whether the students applied the knowledge in a different learning context – in this case, the design studio. Among these students were Jessica Coleman and Matthew Goyak whose work I will show you today.

The central pedagogic argument was that design students need to learn from their everyday landscape, but such learning can only be triggered by *systematically changing the vantage point through which the student encounters their world and applies new knowledge*. This paper examines the use of learning triggers as a way to achieve this. The term "learning trigger" is used in Problem Based Learning pedagogy to refer to a mechanism or devise used to activate certain cognitive or learning process. Triggers used to encourage students to transfer knowledge from everyday life into the design studio and vice versa included reading response papers, in-class exercises, case-study analysis, individual and group assignments, and projects. [4] In this paper we will look at the role of two strategically placed assignments as triggers to enable students see, interpret, and design the idea of "spatial and social territories" in a nuanced manner. The assignments were an urban space analysis in Canada and a paper on house form and culture of three generations of the students' immediate family.

History

This course grew out of "Exploring the Novice-Expert Relationship in Core Curriculum and Early Major Courses," part of a three-year project funded by the Lumina Foundation for Education.[5] Faculty participating in this project "developed field-specific, 'high-involvement' teaching and learning strategies in their respective areas of expertise to help students perform better. 'Performing better' in this instance means helping early-majors or students in core classes 'enter into' a field, to understand how a discipline 'makes meaning.'"[6] As specialists in their field, faculty members had an intuitive understanding of expert-knowledge of the field (what John Bruer in *Schools of Thought* (1993) calls domain-specific knowledge). By incorporating recent scholarship on education and cognitive learning strategies (such as, meta-cognitive skills, chunking, problem-based learning, and novice-expert learning models) the aim of the Lumina project was to integrate research on pedagogy into classroom strategies for the delivery of the discipline-specific knowledge content. [7]

This project recognized that by teaching a novice to emulate learning processes of the expert in the field we could achieve higher levels of learning.[8] Within the cognitive domain, Benjamin Bloom (1956) developed a taxonomy of six levels of learning: knowledge, comprehension, application, analysis, synthesis, and evaluation. Analysis, synthesis, and evaluation are higher levels of learning that is observed among experts. Higher level learning develops critical thinking skills and metacognition, the advanced ability to monitor, control, and evaluate one's own learning process.

Using Shavelson and Huang definition this course imparted 4 levels of domain-specific knowledge, viz. declarative (knowing content), procedural (knowing how), schematic (conceptual and epistomogical), and strategic (applicability).[9] Expert knowledge in design consists of formal skills by which designers order the physical

environment and respond to esthetic, social, technological, ecological, political, and economic forces. In order to do that, an expert develops a "way of seeing,"— a method by which they read and evaluate the built environment. The expert also develops a "way to translate" abstract ideas and concepts into concrete physical designs. This class attempts to delineate this method of "reading" the built environment to the beginning architecture student so that they can use it to "see" and evaluate their everyday ordinary landscape.

One of many central concept used by experts and scholars to understand social and cultural aspects of the built environment is the notion of social and spatial territory. Scholars distinguish between "territorial delineation" and "functional demarcation" of space.[10] Territorial delineation of space is based on how humans claim space and control space while functional zoning is more static and considers the socially-constructed "use" suitable for that space. The former is concerned with how people inhabit and occupy of space while the latter is based on function. By the former definition a bedroom will be a place to rest, sleep, read, converse with close friends, and have an occasional snack while according to the latter bedroom is a private place to sleep at night.

Once a student makes this distinction by being able to see, document, and analyze how territories can be claimed by users, her design process undergoes a substantial transformation. She develops a better understanding of human scale, proxemics, and privacies. She develops a sophisticated understanding of public, secondary, and primary territories (rather than the crude and problematic public/private delineation) as part of a highly nuanced continuum of territorial claims in the built environment.[11] The student focuses her attention towards how boundaries and edges differentiating one or more territories can be delineated in a sophisticated manner.

Students shaded the various territorial claims for the architecture building as pretest and posttest. The tests show that initially students saw the interior spaces as a series of distinct and well-bounded public and private spaces. Later the drawings became fine-grained with the appearance of secondary claim zones and transition or in-between zones -- a more nuanced spatial-continuum.[12] This nuanced understanding of spatial continuum appeared in their studio designs and analysis boards.

Course Modules and Content

The course syllabus was made of three major modules. Several skill-building exercises during the first module (5 weeks) offer students specific "scaffolding"[13] methods to reproduce expert "ways of seeing" the social and cultural aspects of the built environment. As the examples on the screen shows, these methods teach students how to document, analyze, and read human-claims, territorial definitions, human scale, orientation, and anthropomorphic dimension, visual and physical access, and relate social perception and use to the physical assemblage, material, and structure.[14] They analyze the cognitive and experiential aspects of urban space using concepts such as core territories and home-range.[15] They also explore various mapping techniques to map human behavior and observe spatial practice.[16] At an urban scale these methods included figure-ground, linkage, and place analysis.[17]

At the end of the five week methods-section the first trigger assignment tested the students' ability to apply these methods in Quebec, Canada.[18] Behavioral mapping in the Quebec assignment added to this fine-grained appreciation of space. During the hands-on observations in Canada students began to notice that a given space can be occupied by one and many people in multiple ways and for multiple time-periods. They found that the design, articulation, and scale of physical and experiential "edges" can play a big part in making a space flexible and suitable for social use and claims.

We will not discuss the second module of the class expect to state that it was designed to extend the vocabulary and knowledge of social theory through critical reading of scholarly articles. To help students read and identify important concepts we practiced using a "how to read" manual in class, as a scaffolding.[19]

The final module consisted of an assignment based on a project devised by Bill Eisenstein and Prof. Peter Bosselmann at the University of California, Berkeley. In this project student

investigate homes inhabited by three previous generations in their family and analyze territorial delineations to find out how these how these houses reflected their "family's culture, lifestyle and ambitions, and how economic, environmental and technological forces may have shaped the form of the house."[20] The project was wide open, difficult without initial guidance. Yet many students excelled. While students investigated the typological and social history of home within their own family, they also learnt from comparison with others in the class during weekly presentations and discussions. They studied Sanborne maps, old photographs, diaries, city directories, popular fiction of the time to reconstruct the lives of their parents and grandparents. They were encouraged to interpret music and movies of the time to imagine life in the past and evaluate the interior spaces of the homes they studied. This assignment also challenged the students' research skills, observational skills, documentation skills, and analytic skills and many didn't like this format.

Knowledge and Teaching Model

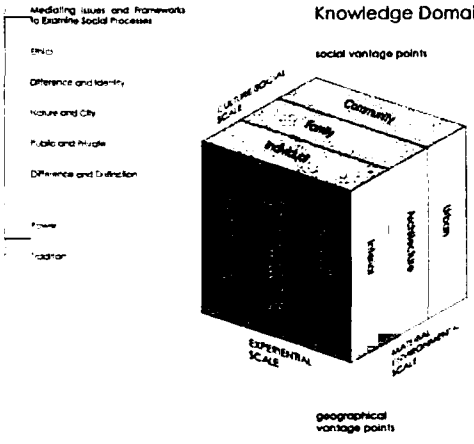


Figure 1 was used in this project to conceptualize how an expert may organize a domain of knowledge that specifically deals with ways social, political, and cultural processes operate within the built environment. This knowledge is produced differentially depending on the social, spatial, and historical scale at which the analysis is done. The central hypothesis was by changing the scale of analysis we could encourage an upper order learning (application, synthesis, and evaluation) in the classroom.

The everyday landscape reflects our culture and values. We see it as natural, unquestioned, and obvious because what we see matches our expectations and widely held assumptions. But because this landscape is so "obvious" and normative, it is difficult to read, perceive, and engage with it.[21] The Canada Analysis and the final 3-generational house project are examples of changing the historical and geographic scale of analysis in order to allow students an opportunity to critically read the everyday landscape and see the "frames" that sustain their everyday environment - otherwise difficult to see because they seem so normal and obvious.

Testing success/failures

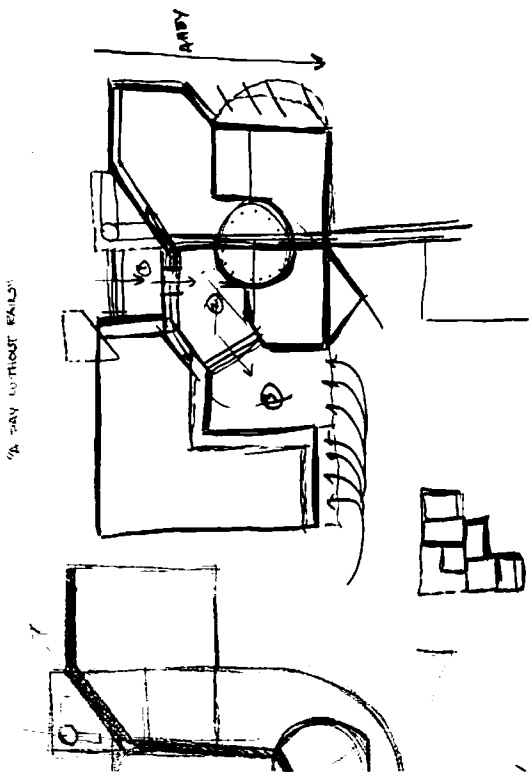
Teaching design student social and cultural theory and prodding them to shift their attention from esthetic and formal issues to a critical examination of the profession is always difficult. But as scholars show approaching learning from the problem based learning methods can be stressful, alien, and hence disconcerting to students.[22]

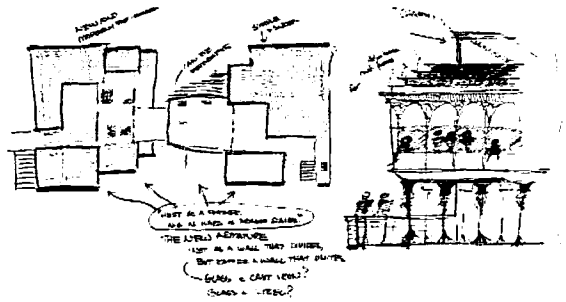
However this model can have major problems if the application timing, available time, and content organization are not fine-tuned. The class succeeded in generating very high level of products from the students. The post-tests compared to the pretests certainly showed that many of the pedagogical objectives were successful. Yet the students were not very happy with the experience. Some said that they were disappointed because they expected to learn about other cultures. Others failed to see the importance of courses such as this and prioritized their time for architectural studio. The large quantity of reading necessary in the second part also caused real problems and alienated many students. This slide shows identifiable areas where changes should be considered in the second year of this grant. Most of the changes relate to organization and methods of application.

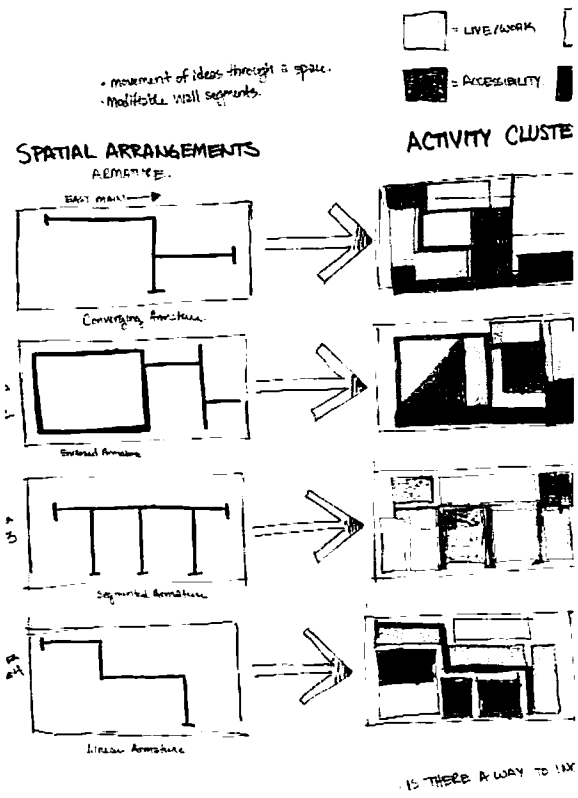
There is a larger problem that produces disjuncture between knowledge and practice in architectural education that needs to be addressed. Design knowledge is termed "ill structured" and design problems are called "wicked problems" because the knowledge domain is broad, complex, irregular, and not conducive to generalizations and even application

across diverse contexts. Researchers have suggested that knowledge-transfer and instructional emphasis on ill-structured domains should shift from learning of large generalizations and pre-compiled schemata to the assembling of knowledge encountered *while solving problems* in specific context. While the architecture studio can be a place for such scholarship, in reality it is not. Rather than being a place for systematic and rigorous scholarship a studio often turns into a place for egoistic self consumption. Without the help and close coordination with studio instructors the objectives of this course is difficult to achieve.

Appendix: images of student work

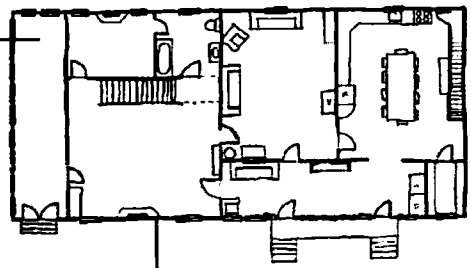






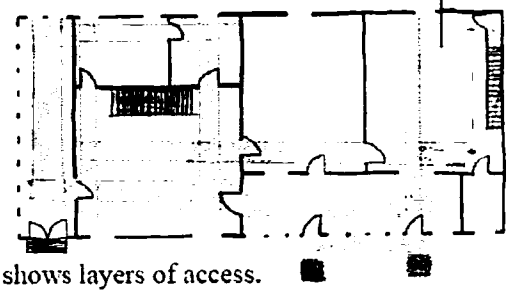
Use of territory in Matt Goyak's studio project (above)

Front porch used to establish formality and welcome guest. Garage was not visible because of informality.

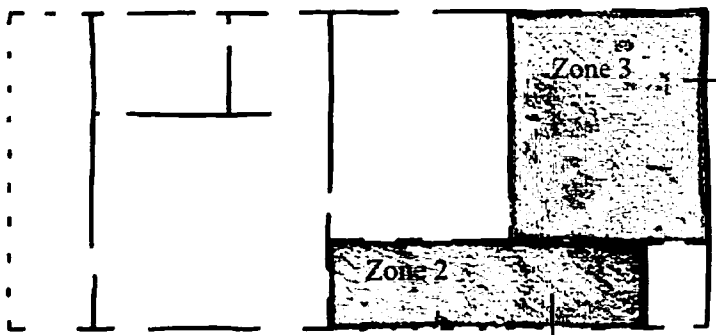


Kitchen was seen as the main public / work space within the home. Because of being farmers, the garage did not need to be attached to promote efficiency within the kitchen.

Parlour used as a sitting room. It is a transition from formal/ public to informal/ primary.



This drawing shows layers of access. Informal spaces such as porch and kitchen have two layers of access, which promote ease of circulation to and from work/ and living.



The kitchen is the space that everyone needs to get to when coming in from work and is the end of the entry sequence.

The service core acts as a transition. The large size encourages people to stay longer. This reflects the society which is not automobile-based or fast paced.

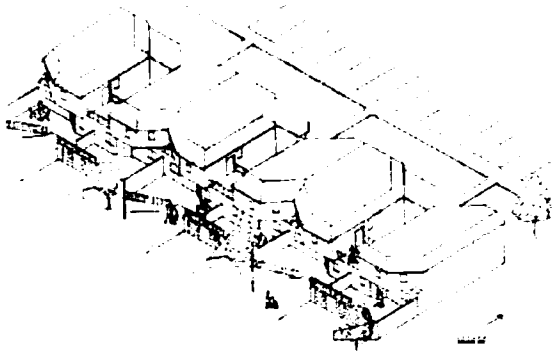
Zone 1 would be the garage. It is located in the tool shed and is the first stage in the entry sequence. Because it is detached, the sequence takes longer to execute and makes people walk to zones 2 and 3.

Territorial analysis in Jessica Coleman's 3-generational house analysis (above)

Territories in Jessica Coleman's Studio design. (below)

Sheidler Apartments

A New Experience



Endnotes

[1] Architectural historian Paul Groth writes about bridging the gap between vernacular and high-style architecture in cultural landscape historiography. He refers to the scholarship of William Adelman, Reyner Banham, and Anthony King as exemplars of such scholarship. What makes these scholars different from historians of cultural landscapes is that they make historical interpretive evidence translatable to the design process. While undoubtedly both processes inform each other, the historical scholarship is explanatory, interpretive, and analytic while the design process is oriented towards active interventions and (re)production. Although both processes enrich the other, an integration of historical imagination in the design process is difficult to achieve at the second year level studio.

Paul Groth, "Generic Buildings and Cultural Landscapes as Sources of Urban History," In *Journal of Architectural Education* 41(Spring 1988): 41-44.

Paul Groth, "Making New Connections in Vernacular Architecture," *The Journal of the Society of Architectural Historians* 58 (September 1999): 444-451.

[2] The researchers in the environment-behavior field, working on the scientific model, moved from the general research and theory-building stages into application and specialized research.

[3] See for instance Radhika Mohanram, *Black Body: Women, Colonialism, and Space*, Public Worlds, vol. 6 (Minneapolis: University of Minnesota Press, 1999).

[4] Problem Based Learning (PBL) has been a teaching strategy used in professional schools in law, agriculture, and medicine. Although architecture schools utilize many PBL techniques, there have been no studies on the pedagogy and methods. The only example is available at

Erik de Graaff and Bob Cowdroy, "Theory and Practice of Educational Innovation: Introduction to Problem-Based Learning in Architecture: Two Case Studies," In *International Journal of Engineering Education*, February 12, 1997, <http://www.ijee.dit.ie/articles/999986/article.htm > February 2, 2006

Simone Abram and Philip Booth, "Culture, place and planning: A case study of problem based learning," Department of Town & Regional Planning, University of Sheffield, n.d.

http://www.cebe.heacademy.ac.uk/learning/casestudies/case_pdf/sabram.pdf>, (March 2, 2006)

[5] The project faculty consisted of an interdisciplinary group of educators who taught university humanities core and early major classes. Among them were educators from sociology, philosophy, design, and health sciences.

[6] Lumina Project Proposal for the ISSOTL conference, Vancouver.

[7] "Cognitive flexibility is a quality of mind," argues Efland that enables learners to use their knowledge in relevant ways in real-world situations. See also work of Rand Spiro, Paul Feltovich, Richard Coulson, and Daniel K. Anderson.

Albanese, M.A. and Mitchell, S. Problem-Based Learning: A Review of Literature on Its Outcomes and Implementation Issues, *Acad. Medicine* 68(1993): 52-81.

Engel, J. (1991) Not Just a Method But a Way of Learning. In The Challenge of Problem-Based Learning, Bould and Felletti, eds. pp. 21-31, New York: St. Martin's Press

Barbara Duch, Susan Gron, and Deborah Allen, (editors), *The Power of Problem-Based Learning, A Practical "How To" For Teaching Undergraduate Courses in Any Discipline*, (Delaware: Stylus Publishing, 2001)

[8] Bloom Benjamin S. and David R. Krathwohl. *Taxonomy of Educational Objectives: The Classification of Educational Goals, by a committee of college and university examiners.* New York: Longmans, Green, 1956.

[9] Richard J. Shavelson and Leta Huang, "Responding Responsibly to the Frenzy to Assess Learning in Higher Education," *Change* (January/February 2003): 11-19.

[10] Amos Rapoport, "On the Cultural Responsiveness of Architecture," In *Journal of Architectural Education* 41 (Autumn, 1987): 10-15.

N. John Habraken, "Territory," In *The Structure of the Ordinary,* Cambridge: MIT Press, 1988, pp. 126-140.

[11] In this class students used Irwin Altman's territorial definitions of privacy - primary, secondary, and public. Compared to the more common public/private dichotomy, Altman's definition is based on the nature of human claim over space. Primary space is one where a single individual can lay complete and undisputed claim. Public space can be claimed by anyone as long they follow the etiquettes of the community, while secondary spaces are gray zones where claim is temporary and negotiated.

[12] See also human aspects of dimensions and scale (proxemics) in Edward T. Hall, *The Hidden Dimension,* (New York: Doubleday, 1966).

[13] In the model of cognitive apprenticeship, developed by Collins, Brown and Newman, scaffolding is described as a way to train students so that they can perform intellectual tasks on their own. A. Collins, J.S. Brown, and S. Newman "Cognitive apprenticeship: Teaching the crafts of reading, writing, and mathematics. "Technical Report No. 403. [ED284181] (1987).

[14] These methods were developed from the following:

N. John Habraken, *The Structure of the Ordinary,* (Cambridge: MIT Press: 1988).

Renee Y. Chow, *Suburban Space*, (Berkeley: University of California Press, 2002).

Both Habraken and Chow's work (Chow uses Habraken's theory to devise her analysis) examines the human and social dimension in architecture through "territories," and territorial analyses.

Amos Rapoport, *Human Aspects of Urban Form,* (New York: Pergamon Press, 1977).

Amos Rapoport, "Environment, Meaning, and Communication," In *The Meaning of the Built Environment: A Non-verbal Communication Approach,* (Beverly Hiss: SAGE, 1982): 177-195.

Altman and Martin M. Chemers (editors), "Territorial Behavior," In *Culture and Environment,* Monterrey, (CA: Brooks/Cole Publishing Co., 1984): 120-152.

[15] Amos Rapoport, "The City," In *Human Aspects of Urban Form,"* (New York: Pergamon Press, 1977): 298-315.

[16] For observation and mapping methods see

See, Kevin Lynch, *Image of the City,* (Cambridge: MIT Press, 1960).

John Zeisel, *Inquiry by Design: tools for Environment-Behavior Research,* (Monterrey: Brooks/Cole, 1981).

Henry Sanoff, *Visual Research Methods in Design,* (New York: Van Nostrand Reinhold, 1991).

[17] See Roger Trancik, "Three Theories of Urban Spatial Design." In *Finding Lost Space: Theories of Urban Design,* (New York: Van Nostrand Reinhold, 1986): 97-124.

Amos Rapoport, "The City," In *Human Aspects of Urban Form,"* (New York: Pergamon Press, 1977): 298-315

[18] During the Fall Semester when this class is offered, the students also participate, as part of their studio, in a compulsory field study trip to Montreal and Quebec, Canada.[18] **CSI_arch** assignment, a group assignment, ties up with the studio to test the students' ability to observe and document the social and cultural aspects of the built environment in Canada. The Canada field study comes as a boon since the "decoding" and analysis assignment is easy to do in a foreign location (most of our students have never been to Canadian metropolis).

[19] This manual adapted from the work of a fellow Lumina Grant recipient Dr. David Concepcion.

David Concepcion, "Reading Philosophy with Background Information and Metacognition," In *Teaching Philosophy* 27 (December 2004): 351-368.

[20] Bill Eisenstein and Peter Bosselmann, "Assignment 1, Part 1," In *Ed1: Introduction to*

Environmental Design, online syllabus, 2004, < http://arch.ced.berkeley.edu/courses/ed1/Assignments03/1-1.htm >, (October 10, 2005)

[21] Erving Goffman initial work on frame analysis explains framing as a process through which society reproduces meaning. By framing, we mean how messages are encoded with meaning so that they can be efficiently interpreted in relationship to existing beliefs or ideas."

Erving Goffman, *Frame Analysis: An Essay on the Organization of Experience*. (London: Harper and Row, 1974), p. 21-22.

Kimberly Fisher, (1997) "Locating Frames in the Discursive Universe," *Sociological Research Online* 2 (September 1997), 30/9/97, <http://www.socresonline.org.uk/socresonline/2/3/4.html> (10/10/2005).

[22] See Maggi Savin-Baden, "Recognizing Disjuction," In *Problem-Based Learning in Higher Education: Untold Stories,* Buckingham: Open University Press, 2000): 90-95.

Elizabeth M Lieux, "A Skeptic's Look at PBL," In *The Power of Problem-Based Learning* Edited by Barbara Duch, Susan E. Groh, Deborah E. Allen. (Sterling, VA: Stylus Press, 2001): 224-5, 230-31.