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Systems and Systematic Design Workshop
Fall 2005
Institute of Design

Appendices

Education for Design Policy Synthesis

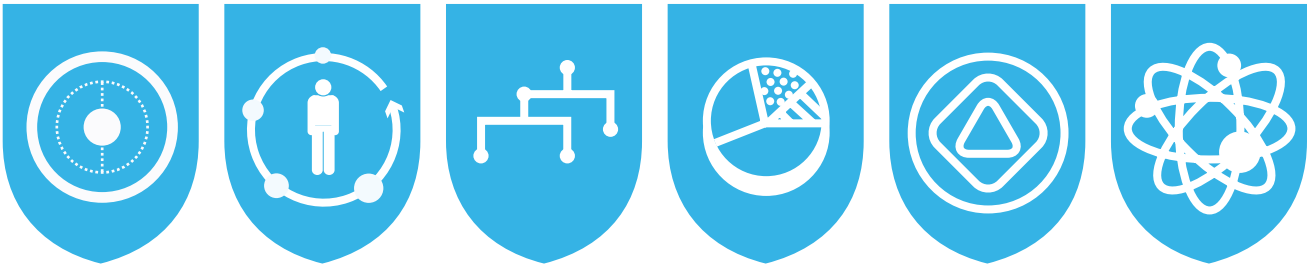

Table of Contents

Project Charter 3

Defining Statements 10

Function Structure 34

Activity Analysis 36

Design Factors 40

Solution Elements 113

Means/Ends Analysis 115

Information Structure 118

Ends/Means Synthesis 122

Feature/Function Matrix 124

System Element Relationships 126

System Elements 128

Institute of Design
Illinois Institute
of Technology

Design Thinking

Education for Policy Design Synthesis

Charter

Background

In the 1980's, with the first comprehensive gathering of data on global warming, tangible effects of population growth began to be firmly associated with the actions of industrial society. Meeting the demands of a growing population for material goods was beginning to be seen as a two-way street. The concept of a "better life" was beginning to look like a relative one—briefly better, relative to the past, but frighteningly better, relative to a very uncertain future.

Because few listened when something might have been done about it, we are now confronted with global warming as an observable, highly threatening fact. Like many other massive events, it took a long time to gain strength, and it will take longer to lose it. It is still in a strengthening pattern, and it is hard to see how that will change in the foreseeable future.

In spite of world-wide awareness, population growth also is still in an accelerating phase. The population of the world is now 6.46 billion and rising. Just 50 years ago it was 2.76 billion. Despite the fact that almost all developed nations are at replacement-level birth rates—or lower—world population is still on a steep incline because of high birth rates in developing countries. Before world population begins to level off, we can expect to see the number rise to over 10 billion—barring catastrophic events.

And catastrophic events are distinct possibilities, growing in probability every year, all because of population growth. A better life for a growing population—even eliminating poverty, as the September 2005 issue of *Scientific American* argues as a goal—means more energy to be produced and more resources to be processed. Without sustainability, this can only mean unchecked resource depletion and uncontrolled greenhouse gas emissions. Both will generate disasters at an accelerating rate.

Global population growth and the problems it has induced—from resource depletion to global warming—are arguably the most serious threats ever to our civilization. But as we finally commit to confronting them, technologies now just evolving will put awesome new capabilities at our disposal. We may yet be able to escape the worst ravages, perhaps even bring better quality of life to our descendents. The question is, will our political decision makers have the wisdom to avail themselves of the right tools at the right time? Will we be able to avoid the worst of projected disasters and make best use of the new technologies? Decision makers will need the best of creative thinking from the science community—*and* from a design community prepared to contribute.

The evidence is that decision makers are not using—or receiving—the full range of advice they need. Advice that offers proactive, constructive, creative options for action is not being heard. The design community must assume new responsibilities and reinvent itself to fill this void. In so doing, it will have to rethink matters of education, research and professional activity, and it will have to prove to leaders that design thinking is a critically valuable asset.

Relevant Trends

Trends initiated by emerging technologies, changing environmental conditions, and evolving social change will have real impact on the situation. Among such trends are:

Food Production on Land
Food production for a growing population is an absolute requirement. In the last 50+ years, beginning with the green revolution that virtually saved India from starvation, the rise in food production has outstripped population growth. But arable land per capita continues to decrease—by 2050, it will have decreased over 62% since the 1960's—and productivity cannot increase indefinitely.

Food Production at Sea
The oceans, once thought to be a limitless food source, are fast becoming a depleted resource. Stocks of wild finfish and shellfish are declining alarmingly. The fishing industry is turning more and more to deep-water species to replace them, often with little knowledge of the biology of the replacement species.

Water Resources
Already in many parts of the world, water supplies are reaching levels of insufficiency. Complicated by agricultural needs for irrigation and the needs of urban centers becoming megacities, the fresh water resources of our lakes, rivers and subsurface aquifers are subsiding. In 2003, 9,500 children were dying daily from insufficient or contaminated water supplies. One-third of the world's population, by some experts' analysis, live in water-stressed countries now, with two-thirds of the world to share their dilemma by 2050.

Mineral Resources
Mineral resources are approaching finite limits, exhausted in some locations, more difficult to extract in others. While supplies of some minerals are in no immediate danger, others are under severe pressure. Oil is a resource of vital concern, with production expected to peak in this decade or shortly thereafter. The Hubbert Curve, long-used as a predictive tool in the petroleum industry, when coupled with modern corrective tools, predicts that we are reaching worldwide peak production *now* and face a reduction in production of approximately 3% per year very soon. Not only will that oil production have to be replaced as an energy source, additional energy sources will have to be found to keep pace with the population curve.

Population Movement
In an interesting paradox, the countryside is becoming less—not more—inhabited as we add to the population. The people are moving from the country to the cities. As of this year, 2005, the world is more urban than rural for the first time. In the next fifteen years 300 million rural Chinese will move to the cities. In 1950, only two cities in the world, Tokyo and New York City, were over 10 million in size. By 1975 there were 4 such megacities, and by 2003, there were 20. By 2015 there will be at least 22. In China alone there are between 100 and 160 cities with over 1 million inhabitants (America has 9, and Eastern and Western Europe together have 36). Cities are complex, sophisticated systems, but their managers will need all the skill they can command to deal with the great urban migration.

Climate Change
Climate and weather patterns are changing. Some regions are simply getting drier or wetter, but the greatest damage will come from sustained, severe droughts and intense, prolonged flooding. The problem is change: eco-systems confronted with wetter or drier conditions for periods far longer than the environment or its inhabitants are prepared.

Rising Ocean Levels
Ocean levels are rising. Temperature rise under global warming is greatest at the poles, and polar melting is accelerating. Melting icebergs have little effect on rising water levels because the ice is already floating, but ice melting on land, such as in Greenland and Antarctica, will contribute to rising water levels, and the thermal expansion of water as it is heated a degree at a time will also contribute. The Intergovernmental Panel on Climate Change in its 2001 report, estimates a 45 cm (18 inch) mean rise by the end of the century with a low estimate of 9 cm (3.5 inches) and a high estimate of 88 cm (35 inches). Many of the world's major cities are on ocean coasts or waterways close to the oceans.

Storm Violence
The increased heat energy created by global warming is feeding more violent storms. Storms over the water will increase in number and in violence. Storms over land, although less subject to the stimulation of ocean heat, will draw from the weather systems that build over the oceans and move readily onto land. All but the regions most remote from the coasts will be influenced. Category 4 and 5 levels can be expected increasingly for hurricanes, cyclones, typhoons and tornados.

Moving Ecological Zones
On a longer scale, climate changes are moving the zones in which species can live. Warmer winters, earlier springs and hotter summers are changing key environmental characteristics crucial for species' survival, even existence; and as ecological zones migrate northward (or southward in the southern hemisphere), they will do so at a pace too fast for plant species to follow. When species disappear, others dependent on them are also affected, and eco-systems disintegrate. Biodiversity will decrease and extinctions will take place.

Increasing Expectations
The growing availability and capabilities of communications such as cellular telephones, satellite and cable TV, and the Internet across the country (and the world) are providing people with daily knowledge of living conditions, problems, products, threats and services everywhere. The media are creating growing avenues for fast communication between protectors and populace. They are also educating the populace on the state of conditions and creating expectations that both fuel demand and create willingness to change.

Internet Penetration
Computer use and Internet access grow exponentially every year. Information of encyclopedic detail can be obtained more and more easily, and complex, sophisticated processes can be used remotely. Access to high-quality communications and sophisticated computer tools are increasingly available to individuals and groups anywhere. In the United States, Internet penetration has reached 67%.

Emerging Technologies
The pace of technological change continues to accelerate, bringing new science to commercial, institutional and industrial uses at an ever quickening pace. Most notable among many fields, major technological innovations can be expected in the new disciplines of molecular nanotechnology, robotics and the biosciences.

New Relationships
Greater public mobility and access to information is changing the nature of association for many individuals and organizations. Organizations that once operated in isolation are now players in a common environment. Sometimes the emerging relationships are competitive, sometimes cooperative. New forms of relationship can be expected and created as conditions evolve.

Project Statement

Using Structured Planning methodology, develop a proposal for a design education program to prepare qualified individuals for governmental and institutional service as advisors on Policy Design Synthesis. The proposal should:
1. characterize critical activities where high-level decision makers should have access to the strengths of design thinking.
2. identify current weaknesses in the preparation of designers for working at institutional and governmental policy-making levels.
3. consider procedures and organization structures appropriate for recruiting, training and placing students.

Goals

As general guidelines a program for Policy Design Synthesis education should:

• Explore a full range of possibilities, paying especial attention to appropriate technologies and user needs.

• Consider both high- and low-tech concepts as they are appropriate.

• Include ideas for content, form and structure—including procedures, policies, events, activities, organizational concepts and any relevant relationships among them.

• Explore revolutionary as well as evolutionary ideas.

• Accommodate all users of the system, from implementation to adaptations and provide for them in the design. Thoroughness is a step toward system integrity.

• Consider potential costs and funding thoughtfully; the proposal should not incorporate unnecessary frills, but it should not sacrifice effectiveness for low cost.

• Treat the design problem as design from the inside out; user operational needs come first, with every attempt possible made to satisfy them in some way, even when tough design decisions must be made.

• Conceive the properties and features of the educational program as means to build trust and cooperation between schools and the governmental and institutional leaders the schools will support.

• Consider the project as one component of four demonstrating advanced design thinking and showing how it can be extended to decision making at the policy planning level.

Overall, the solution should:

• Assume that the proposal can be acted upon as it is conceived. Do not underpropose on the assumption that a concept might be politically opposed.

• Demonstrate what might be achieved. The value of the proposal is in its ideas, not its certain attainability. Ideas that might not be fully attainable under today's conditions may be incrementally achieved tomorrow—*if they are known.*

Resources

Resources for the project will be:

Physical:
• The facilities of the Institute of Design, including Room 514 as general meeting space at the beginning of each class session, and 5th floor for team activities.
• Computing support from the fifth floor computer facilities.
• Equipment as necessary from ID resources.

Financial:
• None

Human:
• *Planning Team:*
Steven Babitch **Enric Gili Fort** **Yanin Kasemkosolsri**
Christine Kim **Sarah Nelson**

•*Project Advisor:*
Charles L. Owen Distinguished Professor Emeritus

Schedule

The project will be conducted from August 30 to December 9, 2005.

Week		Phase	Activity	Product
1	**Aug 30**	Introduction	Introduce project	
	Sep 2	Project Definition	Develop Issues & Defining Statements	
2	**Sep 6** **Sep 9**		**In-Progress Review**	Issues DefStates 1
3	**Sep 13**		Develop Modes and Activities of Function Structure	
	Sep 16		**In-Progress Review**	DefStates 2 Fn Struc 1
4	**Sep 20**	Information Development *Action Analysis*	Generate Functions, Design Factors and Solution Elements	
	Sep 23			
5	**Sep 27** **Sep 30**			
6	**Oct 4**		**In-Progress Review**	DefStates cmplete Fn Struc 2 DesFacs 1 SolnEls 1
	Oct 7	Information Development *Action Analysis 2*	Complete Functions, Design Factors and Solution Elements	
7	**Oct 11** **Oct 14**			
8	**Oct 18**			Fn Struc complete DesFacs complete SolnEls complete
	Oct 21	Information Structuring *Interaction*	Score Soln Elements vs Functions	

Week		Phase	Activity	Product
9	**Oct 25**	Structuring		RELATN input
	Oct 28	Concept Development	Means/Ends Analysis	Information Structure
10	**Nov 1** **Nov 4**		Ends/Means Synthesis	Named Information Structure
11	**Nov 8** **Nov 11**			
12	**Nov 15**		**Presentation**	Initial System Elements
	Nov 18	Communication	Refine final SysEls; write report; complete illustrations	
13	**Nov 22** **Nov 25**	***Thanksgiving***		
14	**Nov 29** **Dec 2**			
15	**Dec 6** **Dec 9**		**Final Presentation**	Illustrated Report

Methodology

The project will be conducted using Structured Planning (See articles on the subject by Charles Owen at ***http://www.id.iit.edu*** under Research and Ideas: Papers). Also, see Charles L. Owen. **Structured Planning. Advanced Planning for Business, Institutions and Government**, 2005.

Issues

Consider the following topics as initial issues to be investigated. Supplement them with additional issues as information is developed during the first phase of the project.

Technology. What approach should be taken toward the incorporation of available and emerging technologies?

Adaptivity. How should elements of the educational program respond to evolving social, political, technological and environmental conditions?

Partnerships. What policy should be set toward partnering with governmental/institutional agencies, suppliers of funding and/or technology, other educational institutions, etc.?

Time of Introduction. When should the program be ready for implementation?

Means of Introduction. How should the program be introduced to facilitate greatest acceptance and smoothest implementation?

Inter-institutional Relationships . How should relationships between a the program and competitive elements of government or institutions be treated?

Funding. How should funding for the program be approached?

International Cooperation. What level of international cooperation should be sought for sharing knowledge and process?

Siting. What special conditions should sites exhibit for programs to be installed?

Content Distribution. How should content be allocated among undergraduate, masters and doctoral program levels?

Defining Statement

Issue Topic: Curriculum

1

Project

Education for Policy design synthesis

Originator

Steven Babitch

Contributors

28 September, 2005, Enric Gili Fort

Source/s

Prahalad, C.K. The Fortune at the Bottom of the Pyramid. New Jersey: Pearson Education, Inc. 2005

Team deliberations

Question at Issue

How should the curriculum be set in order to best educate our students?

Position

- [x] **Constraint**
- [ ] **Objective**
- [ ] **Directive**

The curriculum must cover topics in design thinking, public policy, and elective coursework that covers specific policy making issues in the context of current world affairs.

Alternate Positions

- [ ] **Constraint**
- [x] **Objective**
- [ ] **Directive**

The curriculum should cover topics in design thinking only. It will lose its focus if it's watered down with too many other topics.

Background and Arguments

In addition to design thinking and public policy, topics relevant to politics, international relations, science, engineering, and business could form a variety of elective coursework topics for the Education for Policy Design Synthesis. There could also be specific coursework relating to a specific global threat or issue.

Courses, faculty, and lecturers from these other disciplines will provide insights on how to tackle real world issues that involve their specific field of study. Tackling the elimination of poverty may involve economic or business faculty and coursework because of ideas that have been generated from academics in these fields. For example, C.K. Prahalad demonstrates how you can raise the standard of living for the poor in many underdeveloped countries while still turning a profit.

Many complex problems in the world today require technical experts in science and engineering. Guest lectures should include technical experts as necessary. Projects should involve experts pertaining to the project. Issues such as global warming can be so complex that in order to solve them, they require a multi-disciplinary approach, including the disciplines of science and engineering. Valuable information will be lost if multiple viewpoints are not considered.

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Version: 4 Date: 02 October, 2005 Date of first version: 12 September, 2005

Defining Statement

Issue Topic: Faculty

2

Project

Education for Policy design synthesis

Originator

Christine Kim

Contributors

September 28, 2005 **Sarah Nelson**

Source/s

Team deliberations

Faculty in Environmental Sciences and Policy Division. *Duke Nicholas School of Environment and Earth Sciences at Duke.* http://www.nicholas.duke.edu/cgi-bin/experts/search.pl?Division=ESP&SearchBy=Division&Style=full

Question at Issue

What type of faculty should the program hire?

Position

- ☐ Constraint
- ● Objective
- ☐ Directive

The program should seek out faculty from design backgrounds, policy backgrounds, and other related disciplines to teach in teams.

Alternative Positions

- ☐ Constraint
- ● Objective
- ☐ Directive

The program should seek out faculty from policy backgrounds or related disciplines.

- ☐ Constraint
- ● Objective
- ☐ Directive

The program should seek out faculty from design backgrounds, related disciplines, or with a specific design interest.

Background and Arguments

To effectively teach design thinking, the program's faculty must understand and have applied the principles of design thinking, as well as know how to teach these principles to students from different education levels. Because the primary goal of the program is to bring design thinking into public policy, it is also important to have faculty that is well-versed in public policy. Additionally, having adjunct faculty in other disciplines, such as science and law, will strengthen the education program by providing students with a broader perspective. This broad-based knowledge and perspective is critical to design thinking.

In this period where the value of design needs to be communicated to policy makers, it is imperative that the faculty members be respected by both the design and public policy community. The quality of the faculty members represent the quality of the educational experience, and must therefore be selected carefully based on their potential contribution in this initial attempt to marry design and public policy.

A team-teaching approach by design and policy faculty may be appropriate in courses where students must apply design and policy knowledge in tandem. Understanding design thinking often requires hands-on application of its methods. Therefore, it is important that faculty be able to teach both principles of design thinking as well as how to employ it to address a variety of issues related to public policy. In most cases, professors or adjunct faculty will have expertise in one of these areas, but not both. A team-based faculty approach may be an effective method to introduce and integrate both design and policy within a classroom. For example, a course in Environmental Policy Design may employ a professor from a policy school, such as Lynn A. Maguire from the Nicholas School at Duke who currently teaches the Practice of Environmental Management and Director of Professional Studies to teach the policy perspective. To integrate the design perspective, Professor Charles Owen from the Institute of Design might contribute his knowledge on design thinking and structured planning. Enabling students to see the two disciplines side by side would help them see how they might both be used together to create more effective solutions.

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Version: 4 Date: 4 October, 2005 Date of first version: 8 September, 2005

Defining Statement

Issue Topic: Quality

3

Project

Education for Policy design synthesis

Originator

Steven Babitch

Contributors

28 September 2005, Enric Gili Fort

Source/s

Morse Robert J. and Flanigan, Samuel "The Ranking Methodology" 2005
URL: http://www.usnews.com/usnews/edu/grad/rankings/about/06method_brief.php

Question at Issue

How should the quality of our education be evaluated?

Position

- ☐ **Constraint**
- ☐ **Objective**
- ☒ **Directive**

The quality of our education ought to be evaluated through a variety of metrics, both internal and external.

Alternate Positions

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

The quality of our education should be evaluated solely through our being able to penetrate policy making bodies and decision makers.

Background and Arguments

The issue of determining a quality education is always subjective. The key is to define the goals of the education and choose a method(s) by which EPDS can determine if it is achieving those goals. There are two ways to consider how to evaluate the program: internally and externally. By internally, the intent is to evaluate specific coursework, course topics and their relevance to the needs of the our graduates. This would be performed by faculty who profess the program.

Externally, there are a number of criteria which can be used to evaluate our education. One popular method is the process of gathering feedback and insight from the organizations and institutions that hire graduates. These are the people in the "real world" of policy making and advanced policy planning who have experienced the process first hand. U.S. News and World Report evaluates graduate schools by how well the companies evaluate graduates they have hired. The program could apply a similar methodology to evaluate this program.

Another method for evaluating the quality of our education is through gathering feedback from our alumni. They have experienced our education first-hand. This has two purposes: the first is to capture their opinions of our education. The second is to provide a medium to continue a longer-term relationship, which we will contiune to provide a link between the educational program and policy making institutions.

A third method of evaluation is a method to determine to what degree we are penetrating the policy making process. This is difficult because of the complexity of the policy making process, but if our graduates were involved during the process, there ought to be a way to capture that involvement.

The faculty and the board of directors of the school the program is within, would use these methods to evaluate the quality of the education. The board of directors would allow for a multi-faceted and external view of the education to balance the faculty who are "internal" to the education.

By having the opinions of people directly experiencing our education along with those in industry, we capture the opinions of the primary people involved. If we were to judge the quality of the education solely by how much we influence policy makers, we may find ourselves judging too harshly, especially in the beginning of the education's existence.

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Defining Statement

Issue Topic: Academic Calendar

4

Project

Education for Policy Design Synthesis

Originator

Sarah Nelson

Contributors

Oct. 2, 2005 **Steven Babitch**

Parsons MFA in Photography and Emerging Technologies Web site
http://www2.parsons.edu/photography/mfa/

Bainbridge Graduate Institute Web site
http://www.bgiedu.org/

Question at Issue

How should the academic calendar by structured?

Position

- [x] **Constraint**
- [ ] **Objective**
- [ ] **Directive**

The academic calendar must be flexible so that students can continue to work professionally and maintain their current lifestyle.

Alternative Positions

- [ ] **Constraint**
- [x] **Objective**
- [ ] **Directive**

The academic calendar should follow a traditional 9-month schedule, with classes during the week.

- [ ] **Constraint**
- [x] **Objective**
- [ ] **Directive**

The academic calendar should follow a traditional 9-month schedule, with classes during the evening and weekend.

Background and Arguments

To attract top quality, mid-level professionals the program must take lifestyle issues into account. Many mid-level professionals have invested significant time and effort into building their careers. These mid-level professionals may have families or other strong ties to their community. A full-time, 9-month program may be prohibitive, causing disruption to career, finances and family. These factors may prevent students from attending the program.

Other higher education institutions have faced similar problems and have developed creative strategies. The Sustainable MBA program at the Bainbridge Graduate Institute "...combines distance learning with monthly, intensive, face-to-face classroom sessions." This flexibility allows students to live and work where they choose while still building a strong, like-minded community. The Parsons MFA in Photography and Emerging Technologies holds a one-week residential seminar each semester and an intensive 8-week session each summer. Students work with an advisor in their hometown and use distance learning technologies to meet online. Other programs, like the Executive MBA program at the University of Chicago, hold classes in the evenings or on Saturdays.

Since the program will bring design and policy disciplines together, face-to-face interactions are crucial to mutual understanding and the sharing of ideas. However, this interaction requirement must be balanced with students' lifestyle needs.

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Defining Statement

Issue Topic: Student Recruitment

5

Project

Education for Policy design synthesis

Originator

Yanin Kasemkosolsri

Contributors

Sarah Nelson

Source/s

Time deliberations

Question at Issue

What approach should we take in our evaluation and acceptance of potential students?

Position

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

Student recruitment should be proposed through several approaches.

Alternative Positions

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

Student recruitment should be searched only from a specific government department.

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

Student recruitment should be done through education promoting fair.

Background and Arguments

Multiple channels of searching for students to join the policy design program should spread access in order to recruit diverse-backgrounds of prospective students because of quality and quantity of the students. The broader recruitment channels are, the better chances to choose the best students are.

Finding qualified students to enroll the policy design program should be opened diversely in order to search for the most appropriate students from variety sources: policy makers, designers, scientists and other field people. If the program is limited to one way of recruitment, it fails to take advantage in terms of gaining multi-experiences and perspectives from various sources of candidates. It will be ultimately restricted in the distribution of class learning process.

The recruitment for potential students is the first gate of educational success and is the reason why many institutions are inclined to gain as many candidates as possible. Furthermore, other well-known universities such as Institute of Design, IIT, University of Chicago, etc., offer a variety of approaches to seek for new students in order to get the best people on hand even though their reputations are prominent. For example, webpage database, educational search-engine websites, printed mails: program brochures, course catalog, direct mail, exhibition at education fairs, program conference, open-day event; campus touring, or word of mouth, these arrays have been used primarily in promotion and recruitment for perspection students. Many schools have found that these facets are effective techniques in terms of getting attention and impress students applying later to the programs Likewise, in order to be successful in recruiting students for the policy design program, it should distribute the program recruiting announcements through various means.

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Defining Statement

Issue Topic: Students: Professional Experience | 6

Project

Education for Policy Design Synthesis

Originator

Sarah Nelson

Contributors

Oct. 2, 2005 **Steven Babitch**

Jorgensen M, Sjober D. "The Importance of Not Learning from Experience," Research for the Research Council of Norway and Ericsson.2000 www.simula.no/departments/ engineering/.artifacts/ eurospi00.pdf

Question at Issue

What type of professional experience should students have before joining the program?

Position

- [x] **Constraint**
- [ ] **Objective**
- [ ] **Directive**

Students must be mid-level or above in their careers. They must have experience in either design, policy planning, or have shown a consistent interest in either of these areas.

Alternative Positions

- [ ] **Constraint**
- [x] **Objective**
- [ ] **Directive**

The program should only accept students with several years professional experience in design.

- [ ] **Constraint**
- [x] **Objective**
- [ ] **Directive**

Students should demonstrate an interest in policy planning or design but should not be required to have direct work experience in either discipline.

Background and Arguments

Mid-level professionals are more likely to possess confidence and experience while remaining open to new ideas. These skills will increase the likelihood of success both during and after the program.

A design thinking approach to policy planning will be a new concept for many people in government. To ensure adoption of this new model, it is important that the program produces credible, competent professionals. Campaign and research efforts can help educate policy makers on the benefits of design thinking, but positive interactions with and good results from trained design professionals will win policy makers over.

Experience in the practical application of design or policy planning theory builds confidence and virtuosity. In addition, experience develops leadership and collaboration skills—including the skill of the artful compromise. In politics and policy, these skills are crucial in the policy making process. In addition, designers and policy planners refine time and project management skills and develop a sense of fiscal responsibility.

Jorgensen and Sjorberg point out that experience can also be a disadvantage, encouraging students to seek confirmation rather than remain open to new ideas. However, the program's ideal student balances significant work experience with a desire to absorb new ideas.

form: 9/19/2005

Version: 3 Date: October 2, 2005 Date of first version: September 11, 2005

Defining Statement

Issue Topic: Students: Educational Background | 7

Project

Education for Policy Design Synthesis

Originator

Sarah Nelson

Contributors

Oct. 2, 2005 **Steven Babitch**

Sill, David J. "Integrative Thinking, Synthesis, and Creativity in Interdisciplinary Studies" The Journal of General Education - Volume 50, Number 4, 2001, pp. 288-311

Question at Issue

What type of educational background should students have?

Position

- [x] **Constraint**
- [ ] **Objective**
- [ ] **Directive**

Students must possess an undergraduate degree, a master's degree and/or significant work experience. This degree may be in design or policy planning but admittance should be based on breadth and area of professional experience in design or policy planning.

Alternative Positions

- [x] **Constraint**
- [ ] **Objective**
- [ ] **Directive**

Students must possess an undergraduate or graduate degree in design or policy planning.

- [x] **Constraint**
- [ ] **Objective**
- [ ] **Directive**

Students must posses an undergraduate or graduate degree in design.

Background and Arguments

Both design and policy planning require creative professionals with a broad background. The content of the program will require the ability to synthesize, think creatively, live with ambiguity, and explore uncomfortable ideas. Preparation for this work begins with a well-rounded undergraduate education and is further refined by a masters degree in design or public policy and significant, successful work experience. (See Students: Work Experience Defining Statement for further discussion.)

A specialized undergraduate education, such as a graphic design degree or a business degree, can provide recipients with specific tools. Technical skills are sometimes emphasized over conceptual skills, producing linearly thinking students. A background in many subject areas, including social and physical sciences, language, humanities, and art can prepare a student to be resourceful and broad thinking. This background prepares students for the program's truly interdisciplinary approach where outcomes "...involve higher order thinking skills such as integration, creativity, and evaluation." (Sill, p. 292).

A master's degree further builds area knowledge and research expertise. These skills form the foundation necessary for success in the program. Just as sophisticated design discourse is impossible without mastery of basic design mechanics, program students must be able to address ideas of design and policy with the sophistication a master's degree provides.

It remains important, however, that candidates demonstrate both interest and experience specifically in design and policy planning. Designers should demonstrate knowledge of basic skill and have a history of successful projects. Policy planners should also show thorough understanding of policy principals and have a successful track record. Both must share an interest in each other's discipline.

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Version: 3 Date: October 2, 2005 Date of first version: September 11, 2005

Defining Statement

Issue Topic: Student Residency

8

Project

Education for Policy design synthesis

Originator

Christine Kim

Contributors

September 28, 2005 **Sarah Nelson**

Source/s

Team deliberations

Question at Issue

Should students be required to reside near the program location as full-time students or should the program be flexible to accomodate different schedules?

Position

- ☐ Constraint
- ☒ Objective
- ☐ Directive

The program should allow the student to choose their pace of learning based on their educational background and work experience.

Alternative Positions

- ☐ Constraint
- ☒ Objective
- ☐ Directive

The program should only accept full-time students due to the nature design projects being organized in teams.

Background and Arguments

To attract the best talent to the program, the program must provide flexibility. Students should be given the option to attend full-time, part-time, or with a flexible schedule that is tailored to their needs.

Each student will have different time constraints when deciding to pursue further education. Some may be willing to quit their job and be fully immersed in the program while others may not be as willing to leave their job so readily. Monetary reasons, time constraints, or the opportunity to take what they learn to use immediately in their current field are among some of the reasons students may hesitate to enroll full-time.

For those who are undergoing a career change, a full-time program may be more suitable so that the student receives the foundation necessary to work in public policy. It may be useful for these student to take additional coursework or work as an intern to supplement their education.

Those currently in the public policy arena may be looking to gain additional skills to contribute more actively within their organization or are aiming to be promoted to a higher position. Quiting their job to go back to school would derail their current career track. A flexible program would allow these students to immediately apply what they learn in class at work as well as bring interesting discussion to the classroom from current topics within their work environment. These students could also act as a liason between the program and their place of employment to build stronger relationships between the two institutions.

form: 9/19/2005

Version: 4 Date: 4 October, 2005 Date of first version: 8 September, 2005

Defining Statement

Issue Topic: Employment

9

Project

Education for Policy design synthesis

Originator

Steven Babitch

Contributors

28 September, 2005, Enric Gili Fort

Source/s

Harvard Kennedy School of Government
URL: http://www.ksg.harvard.edu/main/centers.htm

Team deliberations

Question at Issue

What kinds of institutions should the program prepare our students to work with?

Position

- [x] **Constraint**
- [ ] **Objective**
- [ ] **Directive**

The education program must prepare our students to work with a variety of institutions that deal with or come into contact with the policy making process.

Alternate Positions

- [ ] **Constraint**
- [x] **Objective**
- [ ] **Directive**

The education program should prepare our students to work with the federal government because it sets policy on the largest scale.

- [ ] **Constraint**
- [x] **Objective**
- [ ] **Directive**

The education program should only prepare our students to work with private sector and lobbying groups because they are organizations that influence the policy makers.

Background and Arguments

Design thinking is a generalist approach that can be applied to a variety of institutions, government organizations, NGO's, educational institutions, and the private sector, all of whom are involved with the policy making process. Our clients should include all of these organizations. Furthermore, because the policy making process is incredibly complex, it only makes sense that our graduates be hired into all these organizations. Furthermore, because the policy making process occurs on so many levels, our graduates must be involved on those levels in order to have greatest impact.

If Education for Policy Design Synthesis focuses on national governments as our only target for hiring, then we are missing many other pieces of the system that affect change in public policy. While the national level is an important piece, regional and state legislators are often the source of important legislation, and this legislation may proceed to the federal level where it may be passed into law for the country as a whole, or other states or cities may copy the originating state. California was the first state to adopt a no-smoking legislation for bars, restaurants, etc., and New York City followed with the same idea.

It is essential that we focus on all potential employers who are involved with the policy making process. This will only further promote the idea of design thinking in the policy making process.

form: 9/19/2005

Version: 4 Date: 02 October, 2005 Date of first version: 12 September, 2005

Defining Statement

Issue Topic: Administration and Management

10

Project

Education for Policy design synthesis

Originator

Enric Gili Fort

Contributors

Source/s

"The Future of University in an Age of Knowledge" James J. Duderstadt, University of Michigan

Question at Issue

What criteria should the program have in order to setup the management structure?

Position

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

The management structure should enable both a minimum vertical decision making hierarchy as well as enable horizontal initiative by departments.

Alternative Positions

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

The managment structure should establish a waterfall approach to the directing of its structure.

Background and Arguments

Contexts into which policies are set are in constant change and motion due to social, economical and environmental factors. The evolution of these parameters have to be followed attentively by any educational institution willing to adapt to current changes that aims to be ahead in terms of policy design.

Traditional academic structures frequent in most of the universities around the world, which are inherited for years and years, seem too rigid. Its hierarchical structure, both administrative and educational in terms of content and research, probably would prove paralyzing in a time of trying to adapt managerial structure to global changes that may affect the practice.

Considering the future model of educational institutions in the context of the evolution of information technologies (Duderstadt) in which a more decentralized approach will be adopted, there is a need to find a balance between the coordination and centralization of activities, and the will to allow knowledge flourish in a relatively unconstrained manner in various units of execution. When an educational program has high profile students working under its umbrella, new ideas and innovation can come from everywhere, and a more open and a less power-operated structure is in much need to impulse a collective and participatory evolution at all levels within the academic structure.

A desirable model will should work both in vertical and in horizontal levels: vertically, the management should have enough decision power to set the lines within the institution to develop and clearly draw and update which will be the margins within the diverse departments. Thes departments will be able to move and set their own agenda in order to be able to adapt better, meeting the demands of a leading institution.

form: 9/19/2005

Version: 2 Date: 7 September, 2005 Date of first version: 7 September, 2005

Defining Statement

Issue Topic: Funding

11

Project

Education for Policy design synthesis

Originator

Yanin Kasemkosolsri

Contributors

Sarah Nelson

Source/s

Rebecca Hoffman; ID Staff, Institute of Design. (Interviewing, September 28,2005 at 4th floor Institue of Design)

http://en.wikipedia.org/wiki/Non_Profit_Organization

Question at Issue

How should funding for the program be approached?

Position

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

Funding should come from a variety of sources including private individuals, corporations, institutions, and governmental organizations.

Alternative Positions

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

Funding should come alternately from the government.

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

Funding should come solely from the program's tuitions.

Background and Arguments

Education for Policy Design Synthesis proposes creative policy design program through new approaches and bringing better solutions for governmental and institutional service in terms of producing quality design thinkers. The program intends to be a neutral, non-profit organization and be able to cooperate with any other institutions without prejudice. Furthermore, the objective of non-profit policy design program is to have wide open opportunities for many genuine governmental departments and private companies in which to give a hand, and to be able to coordinate student projects or research with the program. Due to the intention of the program, which is to conduct the program that suits for variety-background students to think: "design thinking", it would be an advantage to gain support from different organizations for the program.

In order to operate this program, funding is one of the major concerning issues. This education program must involve in matter of education, research, and professional and academic activities. These bring about a thoughtful budget and monetary plan. As other non-profit organizations that involve in educational programs such as Institute of Design, John F. Kennedy School of Government or other non-profit, policy institutes such as think tanks, World Policy Institute, Policy Studies Institute, American Institute of Philanthropy, etc., their incomes are derived from a variety of sources such as donations, sponsorships, or endowments from different private companies. Therefore, this program should consider raising money through several channels to engage the support in fundraising.

In this program, the goal aims to develop and pursue the creative design thinker people in order to work for governmental and institutional service, so the government and institute should take responsibility for part of the contributions and expenses since all returned benefits would eventually pay back their institutions. However, there is a limited budget from the government for any other spending expenses. It would be unattainable to get enough saving from one specific source.

form: 9/19/2005

Version: **4** Date: 03 October, 2005 Date of first version: 7 September, 2005

Defining Statement

Issue Topic: Tuition

12

Project

Education for policy design synthesis

Originator

Enric Gili Fort

Contributors

Source/s

Team deliberations

Question at Issue

How should the institution structure the program's tuition?

Position

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

The program should modify financial requirements depending on student resources, career projection and academic records.

Alternative Positions

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

Students should have to be able fund themselves or find a sponsor to pay the cost of their education.

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

The institution should pay the full tuition of the students as an academic loan and let them return it in the years following graduation.

Background and Arguments

The fee that students have to pay for their instruction is a major factor at the time of attracting potential students to a program. While some may be very talented and could become great practitioners of the discipline, the lack of financial resources could impede the start of a promising career.

Generally, educational institutions have one level of tuition for all students. This financial burden can be relatively relieved by the aid of scholarships or fellowships based on personal merit of the student. Other students may enroll to the program introduced by their companies that are willing to pay their training as an exchange for signing an agreement for working on the company on a certain amount of years after graduating. These formulas obviously benefit students and allow them to pursue their career goals but certainly the amount of people benefiting from this educational help are very few.

Another formula in practice in the European Union is to finance the whole education of the students. Once the students graduate and as soon they start to receive an income they are asked to return the money progressively and in case they drop the studies they are asked to give the money back. This way has little chance to be used in the USA since the institutions applying this help are normally funded by governmental institutions.

In summary, in order to facilitate a greater number of students access to education and to have a more even and equal level of opportunities, it is not enough to have additional aid for a few selected students and a more flexible scale of tuition has to be set. Therefore, after an evaluation of different attributes of the candidate such as family income, career projection and academic records, a different array of help will be assigned for each potential policy synthesis designer.

form: 9/19/2005

Version: **3** Date: 17 September, 2005 Date of first version: 8 September, 2005

Defining Statement

Issue Topic: Means of Introduction

13

Project

Education for Policy design synthesis

Originator

Steven Babitch

Contributors

13 September, 2005, Chuck Owen
28 September, 2005, Enric Gili Fort

Source/s

Team deliberations

Question at Issue

How should the Education for Policy Design Synthesis be introduced?

Position

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

EPDS should be introduced in a reasonably sized and manageable manner, within a larger university or many universities.

Alternate Positions

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

EPDS should be introduced as a stand-alone school.

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

EPDS should be introduced as a school within a governmental institution.

Background and Arguments

Design thinking at its core is about opening the possibilities of what can be done and seeing an issue from many perspectives. Changing the perception of how design thinking can help is no easy task. As part of a larger movement toward design thinking, specifically the Campaign for Policy Design Synthesis, the use of existing institutions and the respected faculty within these institutions is a necessary element. Merging or forming a partnership with well-respected institutions will provide stability, funding, credibility, and the resources necessary to make policy design synthesis a break-through education in helping solve complex issues facing policy makers today.

The idea of merging design thinking with public policy is a unique proposition. If the program were introduced as a stand-alone institution, it would be very difficult to gain the visibility and credibility necessary for such a program. Therefore, if this program is to take shape, it must be done in a reasonably-sized manner with credible sources and other, perhaps many, well-respected educational institutions.

There is mounting evidence that a range of global issues are not being addressed with existing methods, the right combination of disciplines, and the right combination of people (see the Charter for Education for Policy Design Synthesis). Today, problem solving on a policy making level is done primarily by lawyers and politicians. Innovative thinking is required to tackle the complex nature of policy planning. Innovative thinking is not the primary strength of lawyers and politicians. It is not in their nature of thinking to view all possibilities before choosing a solution. Furthermore, setting policy is increasingly done without fully understanding the opinions of technical experts who really understand the depth of the issue at hand.

Once respected institutions and faculty are identified and confirmed as being a part of the Education for Policy Design synthesis, students will be attracted to the program. Thus, the beginning of producing the person with the right skills to handle complex problems relating to policy.

form: 9/19/2005

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Defining Statement

Issue Topic: Time of Introduction

14

Project

Education for Policy design synthesis

Originator

Yanin Kasemkosolsri

Contributors

Sarah Nelson

Source/s

http://www.stanford.edu/group/dschool/big_picture/our_vision.html

Question at Issue

When should the program be ready for implementation?

Position

- [x] **Constraint**
- [ ] **Objective**
- [ ] **Directive**

The program should be introduced early, once a compelling feature such as competent faculty or a partnership with a credible organization is established.

Alternative Positions

- [ ] **Constraint**
- [x] **Objective**
- [ ] **Directive**

The program should be introduced to the public only after the curriculum has been fully developed, faculty is in place, and all other major decisions made.

- [ ] **Constraint**
- [x] **Objective**
- [ ] **Directive**

The program should be presented while preparing (between) all curriculum is in process and developing stage.

Background and Arguments

The first step of introduction for policy design program is an ultimately important maneuver since it is the first launch of the program. It should be well-prepared in order to be attractive and impressive to prospective students, governments, public and private organizations to engage in this program. All required information and sources should be ready in terms of communicating messages and objectives of this learning.

The most appropriate period of time to commence the program should be right after a compelling feature is established. It is neither too early nor too late due to respective circumstances. Some advance issues are hard to predict, but some positions can be taken in advance. The advantages of implementating the program are: longer time to advertise the program, building the program's reputation, better chance to recruit better faculty or look for multi-disciplinary adjunct faculty, and contact sponsors to join the program.

Although the program should be implemented as early as possible; however, the convincing arguments should be done before executing. Promoting the program is immensely compulsory for initiating the program to gain positive responses so the program should answer the mandatory issues and some providing information. It is not necessary to defer until fully developed. Putting off the introduction longer might have caused disadvantages. In other words, the program will lose the possibility to gain fundraising from various sources, miss the opportunity to get connected among the government and organizations, to promote the program and build the reputation, or to improve parts of the program from feedback.

form: 9/19/2005

Version: **4** Date: 3 October, 2005 Date of first version: 7 September, 2005

Defining Statement

Issue Topic: Siting

15

Project

Education for Policy Design Synthesis

Originator

Sarah Nelson

Contributors

Sept. 12, 2005 **Charles Owen**
Oct. 2, 2005 **Steven Babitch**

Team Deliberations

Question at Issue

What special condition should sites exhibit for programs to be installed?

Position

- ☐ **Constraint**
- ☐ **Objective**
- ● **Directive**

The program's location ought to be multi-urban with networked access to teaching and research resources and close proximity to institutions engaged in policy decisions.

Alternative Positions

- ☐ **Constraint**
- ☐ **Objective**
- ● **Directive**

Administrative and teaching functions ought to be co-located with governmental decision-making (typically, in a country's capital).

- ☐ **Constraint**
- ☐ **Objective**
- ● **Directive**

Administrative and teaching functions ought to be co-located with governmental decision-making (typically, in a country's capital).

Background and Arguments

The collaborative nature of design and the diversity of possible policy applications make site location and available resources highly important to the success of a policy design educational program. Location and access will influence academic, professional, and cultural characteristics. Sites must be chosen carefully to ensure a strong community with ready access to resources unlikely to be internally available to any educational institution.

Policy is made at global, national, and local levels and is influenced by elements of the public and private sectors. To develop policy design synthesis graduates who can fluidly negotiate power structures and work comfortably with policy makers and planners, the campus must provide the diversity of experience possible in multi-industry, political, urban environments. Washington DC, paradoxically, would provide significant access to high-level political policy making, but would have less to offer in economic policy. The fact that different cities have different political, economic, environmental and commercial strengths suggests that a policy design program may benefit from a distributed approach to siting.

Institutions of higher learning often choose to be located on secluded campuses, removed from the worlds of business, industry, and government. These campuses create a safe, "noise-free" place for contemplation and the generation and sharing of ideas. However, these environments differ markedly from the complex working environments policy design graduates will work in, and they have little access to both policy makers and the resources required for policy planning. A multi-industry, urban environment with access to experts at all levels of government and institutions will provide students with the most relevant resources for their studies and future work. A networked selection of such environments chosen for their diversity will enable the program to have greatest impact.

form: 9/19/2005

Version: **4** Date: October 2, 2005 Date of first version: September 7, 2005

Defining Statement

Issue Topic: Internal Environment

16

Project

Education for Policy design synthesis

Originator

Yanin Kasemkosolsri

Contributors

Sarah Nelson

Source/s

Team deliberations

Question at Issue

How should the internal environment be structured?

Position

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

The internal environment should be structured in order to build the creative design community through a variety of mediums and flexible functional spaces.

Alternative Positions

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

The environment should be created only through social space for academic society and program's community.

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

The environment should be provided through isolated space in order to concentrate in academic learning and research rather than group work.

Background and Arguments

Since students spend more than half of their time in school, it is likely to be their second home. The external environment is exceptionally important in terms of protecting and sheltering people, same as the internal environment, which involve in leading many activities to take place. The internal environment includes physical objects and mental factors which have an impact on people who utilize space.

Among professors, students and staff, all require their own private spaces to work on their academic study and research or even their individual activities. In the meantime, they also need to socialize with peers, guessts and others in order to host meeting, events, and participate in various kinds of works and projects both intra and inter connection.

The internal environment should be adjustable to modify for any purpose of use in order to encourage collaboration because collaboration is the heart of effective design practice. Moreover, the space not only needs to support the socializing but also group work, but it should also contribute in the way of positive and enthusiastic emotional support of the interdisciplinary learning sphere.

form: 9/19/2005

Version: **4** Date: 3 October, 2005 Date of first version: 7 September, 2005

Defining Statement

Issue Topic: Culture

17

Project

Education for Policy design synthesis

Originator

Sarah Nelson

Contributors

Oct. 2, 2005 **Steven Babitch**

Tomes A, Oates C, Armstrong P, "Talking Design: Negotiating the Verbal-Visual Translation," Paper for the Second European Academy of Design Conference, 1997.

Question at Issue

How will students learn design thinking and the cultures of design and public policy?

Position

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

The program should teach interdisciplinary understanding implicitly through team projects and explicity through classwork.

Alternative Positions

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

Students should learn to negotiate cultural differences through team building and project work.

Background and Arguments

Designers and policy makers speak different languages, though they may share common interests and goals. Those from quantitative disciplines may find the qualitative nature of design difficult to understand. Designers, inherently comfortable with plurality, may bristle at requests for hard facts, justifications, or black-and-white answers. These different core values may cause significant team conflict in both educational and professional environments. In addition, traditions of dress, language, and social norms may also silently undermine each group's credibility with the other.

To be well-prepared for work in the public sector, designers must be able to move fluidly through both worlds. For example, Tomes, Oates and Armstrong assert a view of design where "...the outputs of individual creativity are progessively negotiated to a mutually satisfactory outcome." Put simply, designers must be able to express visual ideas verbally and translate verbal ideas bask into visual language. Likewise, the program's policy planners must learn visual language and develop comfort with ambiguity. Some skills will grow through interdisciplinary group work, but many of these skills must be explicitly taught.

form: 9/19/2005

Version: **3** Date: October 2, 2005 Date of first version: September 17, 2005

Defining Statement

Issue Topic: Technology

18

Project

Education for Policy Design Synthesis

Originator

Sarah Nelson

Contributors

Oct. 2, 2005 **Steven Babitch**

Williams, P. J., Design, The Only Methodology of Technology? *Journal of Technology Education*, Vol. 11 No. 2, Spring 2000.

Question at Issue

What approach should be taken toward the incorporation of available and emerging technologies?

Position

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

The curriculum should focus on the development of design thinking, using available and emerging technologies appropriately, to support this endeavor.

Alternative Positions

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

The program should tightly integrate new technologies with a procedural design process. Courses should include instruction using related technologies and software.

Background and Arguments

Design and technology have a symbiotic relationship. Technologies take many forms, from simple tools to complex systems. Designers can imagine both new technologies and new uses of existing technologies. In addition, designers are often reliant on various technologies to visualize ideas or develop tools. While students should enter the program with some technical competency, the program should teach students to appraise emerging technologies within the context of the question at hand. Designers must approach technology confidently, be able to use it freely, and envision unorthodox uses for it.

P. John Williams in his 2000 article "Design: The Only Methodology of Technology?" states "neither students nor designers naturally utilize a predetermined process in their work; they invent a process as they progress toward task completion." (Williams, p. 49) Williams further suggests that prescriptive teaching methods may hamper the development of independent problem solving.(Williams, p 52-53) For our purposes, this assertion suggests that the program should create an open environment where students discover and establish their own relationship to technology. Ideally, they will see technology as a means, not an end.

Since the best designers have mastery over extensive toolboxes, the program should encourage designers to develop their own methods. The curriculum should strive for an opennesss to both existing and emerging technologies. Using an open approach to technologies will produce expansive-thinking designers who can effectively work in the policy space.

form: 9/19/2005

Version: 3 Date: October 2, 2005 Date of first version: September 17, 2005

Defining Statement

Issue Topic: Content Distribution

19

Project

Education for Policy design synthesis

Originator

Christine Kim

Contributors

September 28, 2005 **Sarah Nelson**

Source/s

Team deliberations

Question at Issue

How should content be allocated among undergraduate, masters and doctoral programs?

Position

- ☐ Constraint
- ☒ Objective
- ☐ Directive

The program curriculum should include graduate level coursework only.

Alternative Positions

- ☐ Constraint
- ☒ Objective
- ☐ Directive

The curriculum should include undergraduate and graduate level coursework.

Background and Arguments

The most impact designers will have in policy making will come from those enrolled in a masters or doctoral program. Typically, these students have work experiences that help foster additional learning and analysis within a classroom. Those who have significant work experience will be able to draw upon past problems and solutions to help formulate public policy.

Students from different backgrounds have different areas of expertise. Providing a flexible curriculum where students can choose from a variety of elective courses to strengthen areas they lack experience in can help students become more well-rounded. Students from a design background may opt to take more courses in policy, whereas students from a policy background a choose to take additional courses in design fundamentals. Although the program can be very flexible, there should be a core curriculum that all students should are required to take that teach design thinking principles and involve students in multi-discipliary team projects. A doctoral program may require additional course content that promotes the teaching of design research and design thinking. Doctoral students may also be given opportunities to teach courses in the program in addition to taking the existing curriculum classes.

At this time, this program should be offered only at the graduate level. Because undergraduate students do not have significant work experience in either policy or design, they will not be able to contribute as much experiential knowledge as graduate students would be able to in team projects. Because so much of the work is based on teamwork, the contribution of students' different experiences are critical to the design process. Students will also be challenged to think at a deeper, more systemic level, using design thinking to tackle global issues. As graduates of the school, students are expected to be fully prepared to enter positions that can influence policy making at a higher level. These requirements necessitate students enter the program with an existing base of knowledge and experience from a variety of fields.

form: 9/19/2005

Version: 4 Date: 4 October, 2005 Date of first version: 8 September, 2005

Defining Statement

Issue Topic: Inter-institutional Relationships

20

Project

Education for Policy design synthesis

Originator

Christine Kim

Contributors

September 28, 2005 **Sarah Nelson**

Source/s

Team deliberations

Question at Issue

How should relationships between the program and competitive elements of government or institutions be treated?

Position

- ☐ Constraint
- ☒ Objective
- ☐ Directive

The program should actively build cross-disciplinary teams between the program and other institutions to work in a tightly integrated way.

Alternative Positions

- ☐ Constraint
- ☒ Objective
- ☐ Directive

The program should develop teams that can interface with institutions but not necessarily collaborate tightly with them.

- ☐ Constraint
- ☒ Objective
- ☐ Directive

The program should provide differentiated offerings from competing elements of government or institutions to refrain from competing directly with them.

Background and Arguments

Learning in an integrated learning environment, through cross-disciplinary project teams or internships, has many advantages over loosely held alliances between institutions. Interfacing with another institution, whether in a loose or integrated way, can provide increased internal and external awareness of cooperative attempts. The benefit of having a tightly integrated relationship, however, is that both institutions can share not only knowledge capital but human resources as well. Cross-disciplinary teams between institutions builds a stronger network, facilitating deeper knowledge sharing, understanding, and expertise to create better solutions to complex problems. Teamwork collaboration also provides students with opportunities to engage with others from different disciplines. These experiences tacitly teach the value different backgrounds bring to the problem-solving process and the implications they have on good design.

Competing directly with government or other institutions can be counterproductive to the education of policy design efforts, as is completely avoiding competition by altering your offering to accomodate competing programs. Collaboration is a better strategy, in which competing institutions can offer a joint program to strengthen existing programs and add breadth to course offerings. Exchange programs between the education program and policy institutions can also help build inter-institutional relationships as well as give students the opportunity to learn by immersing themselves in their potential work environment. This close contact between the policy and design disciplines will facilitate the sharing of resources and knowlege used to make design and policy decisions.

form: 9/19/2005

Version: **4** Date: 4 October, 2005 Date of first version: 8 September, 2005

Defining Statement

Issue Topic: Partnerships

21

Project

Education for Policy design synthesis

Originator

Steven Babitch

Contributors

28 September, 2005, Enric Gili Fort

Source/s

Brown, Bettina Lankard "Corporate/School Partnerships: Learner Centered or Business Centered? ERIC Clearinghouse on Adult, Career, and Vocational Educational 1999.

Team deliberations

Question at Issue

What policy should be set toward partnering with govermental agencies, NGOs, suppliers of funding/technology, other educational institutions?

Position

- [x] **Constraint**
- [ ] **Objective**
- [ ] **Directive**

The education program, "Education for Policy Design Synthesis" must set policy such that it is open to mutually beneficial relationships with organizations.

Alternate Positions

- [ ] **Constraint**
- [x] **Objective**
- [ ] **Directive**

EPDS should be open to all organizations interested in becoming a partner with EPDS regardless of influence or bias of the organization.

- [ ] **Constraint**
- [ ] **Objective**
- [x] **Directive**

EPDS ought not to partner with other education or design institutions because this could interfere with the innovative nature of the program.

Background and Arguments

Forming partnerships with other institutions may be for the purposes of funding, gaining expertise such as faculty, exchanging students from other institutions, gaining access to various organizations, and building credibility with organizations. The question that arises with partnerships is whether it is mutually beneficial to both parties involved.

According to Bettina Lankard Brown in "Corporate/School Partnerships: Learner Centered or Business Centered?", Many corporate-sponsored education programs, result in commercialism taking precendence over learning. This problem must be considered and thwarted when forming a partnership with an organization providing funding or technology. An analogy can be drawn to a bureaucratic/school partnership, except that rather than commercialism, special interests could influence the partnership. Thus, criteria should be established to ensure the relationship is mutually beneficial and to minimize special interests or political bias. According to the article from ERIC, "Corporate support of education becomes most attractive to both partners when the goals of both industry and education are considered".

Forming partnerships with governmental organizations should be carefully considered. A major problem inherent in government organizations is the issue of special interest and bias. This prevents real progress from being made because of many opposing positions regarding an issue, resulting in a stalemate of progress. Complex problems such as emergency disaster relief, e.g., Hurricane Katrina and the U.S. intelligence community's lack of communication and organization are examples of how bias can impede progress in creating solutions and setting policy that covers all bases. If a partnership is formed with a governmental organization, it is critical not to let the bureaucracy of the government impede the goals of the education program.

Forming partnerships with other educational institutions are not as potentially problematic because of their similar nature. Educational institutions have similar goals and structures, so they are less likely to have the potential problems that a partnership with a governmental organization present.

It is human nature to have bias based on experience and motive. However, if the partnerships are continually reviewed, and there is a process for improving on the findings of the review process, bias and political pressure will be minimized.

form: 9/19/2005

Version: **4** Date: 02 October, 2005 Date of first version: 12 September, 2005

Defining Statement

Issue Topic: Outside Influence

22

Project

Education for Policy design synthesis

Originator

Christine Kim

Contributors

Source/s

Team deliberations

Question at Issue

How does the school remain non-partisan if it has relationships with political groups or students and faculty with political affiliations?

Position

- ☐ Constraint
- ☒ Objective
- ☐ Directive

The school should have relationships with various political groups, but should be neutral and non-partisan in terms of its curriculum, and subjects should be taught with no bias toward any political party or agenda.

Alternative Positions

- ☐ Constraint
- ☒ Objective
- ☐ Directive

The school should not have any relationships with political groups and needs to stay neutral and non-partisan with regards to its faculty and the curriculum they teach.

Background and Arguments

It is difficult to stay neutral on many of today's political issues. Many public policy views are influenced by the political views of the authors and the chances of a bill getting approved in Congress are largely based on the composition of Republicans and Democrats holding the seats. Legislation is usually voted upon based on party lines.

Since the program's goal is to enable students to use design thinking to advise policy makers in their decision-making process, the program must be open to all political views. Design thinking requires breadth of perspective and objective analysis of information to make the best decisions. It is not the place of the program or its faculty to impose a political tilt. The program should not have a bias towards any special interest parties or any affiliated partners of the school.

Designers are often associated with liberal thinking. Faculty should be conscious of the various political views on issues and teach students how to see from not only their political view, but other perspectives other than their own when involved in the design process. This open-mindedness will help students evaluate public policy matters without pushing their own agenda and achieve the most benefits for all stakeholders when formulating new policies.

form: 9/19/2005

Version: 2 Date: 4 October, 2005 Date of first version: 8 September, 2005

Defining Statement

Issue Topic: International Cooperation

23

Project

Education for Policy design synthesis

Originator

Enric Gili Fort

Contributors

Source/s

Team deliberation/s

Question at Issue

What level of international cooperation should be sought for sharing knowledge and process?

Position

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

The program should set up a special department to be in permanent contact with other institutions and coordinate collaboration.

Alternative Positions

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

The program should periodically contact other institutions with similar goals to have updates about development.

- ☐ **Constraint**
- ☒ **Objective**
- ☐ **Directive**

The institution should take advantage of any contact with other institutions in international professional meetings and exchange as much information as possible.

Background and Arguments

Policy making is applied worldwide in different ways and in a very different array of social, economical and environmental contexts. All the educational institutions dedicated to the teaching of policy making can learn and benefit greatly from the experience and the study of specific situations that have been generated somewhere else.

Information technologies clearly increase the possibilities of exchange of these experiences and if on top of that we consider how difficult it is to simulate possible consequences of the application of a policy, the knowledge and advantages that can be extracted is invaluable.

Cooperation with peer institutions that share common goals is a frequent practice among institutions. This is usually done periodically in international meetings or gatherings, as a more vivid format of exchange, and in a more asynchronous way of communicating, institutions stay in contact with regular means of communication and occasionally by people that among other institutional duties, spend part of their time on this task. Very often the time and dedication of this part-time dedicated person or department is not as high as it should be and the international cooperation falls at the bottom of the priorities below more demanding everyday tasks.

Policy design synthesis is a discipline that is still on its early stages of professionalization and is in much need of constant questioning and reassuring of its own methods and practices in order to make the practice evolve towards higher standards. Therefore, not only there is a need for casual international cooperation but for a constant bi-directional flow of exchange of knowledge which should be taken care of by either dedicated individuals or departments in order to ensure constant feedback from institutions.

form: 9/19/2005

Version: **2** Date: 7 September, 2005 Date of first version: 7 September, 2005

Defining Statement

Issue Topic: Adaptivity

24

Project

Education for Policy design synthesis

Originator

Enric Gili Fort

Contributors

Source/s

Müller, Pierre; Surel Yves. **L'analyse des politiques publiques**. Paris, 1998

Blakemore, Ken; **Social Policy: an Introduction.** Open University Press, 1998,

Question at Issue

How should elements of the educational program respond to evolving social, political, technological and environmental conditions?

Position

- [x] **Constraint**
- [ ] **Objective**
- [ ] **Directive**

The program must be as updated as possible, not only concerning present conditions but also newest trends in order to give students more up-to-date skills ready to be applied.

Alternative Positions

- [ ] **Constraint**
- [x] **Objective**
- [ ] **Directive**

The educational program should consider present events, but its focus should be directed mainly to the teaching of skills related to design thinking and its methodology.

Background and Arguments

Policy, as a plan is intended to influence and determine decisions and actions, all pursuing a specific goal or aim, and they describe what ought to happen. Unlike laws or static lists of goals, policies are living things that evolve along the contexts they want to influence. They change because the conditions under which goals have to be met change constantly, therefore they have to be revised accordingly.

Institutions and governments articulate their policies around the individuals they represent, and when setting these policies, they need the most updated knowledge concerning the conditions that may affect their represention. These new conditions certainly can make past policies useless and the new ones have to adapt to meet the same goals they were set to in the most recent context.

Therefore, at the time of designing an educational program that aims to teach to design policy, we cannot overlook the importance that the study and knowledge of these constantly variable conditions have on the practice. Especially when the speed of change in present society is so accelerated and where globalisation make changes more interrelated. The program has to be able to follow these changes and be ready to adapt its methods, contents and perspectives as these happen.

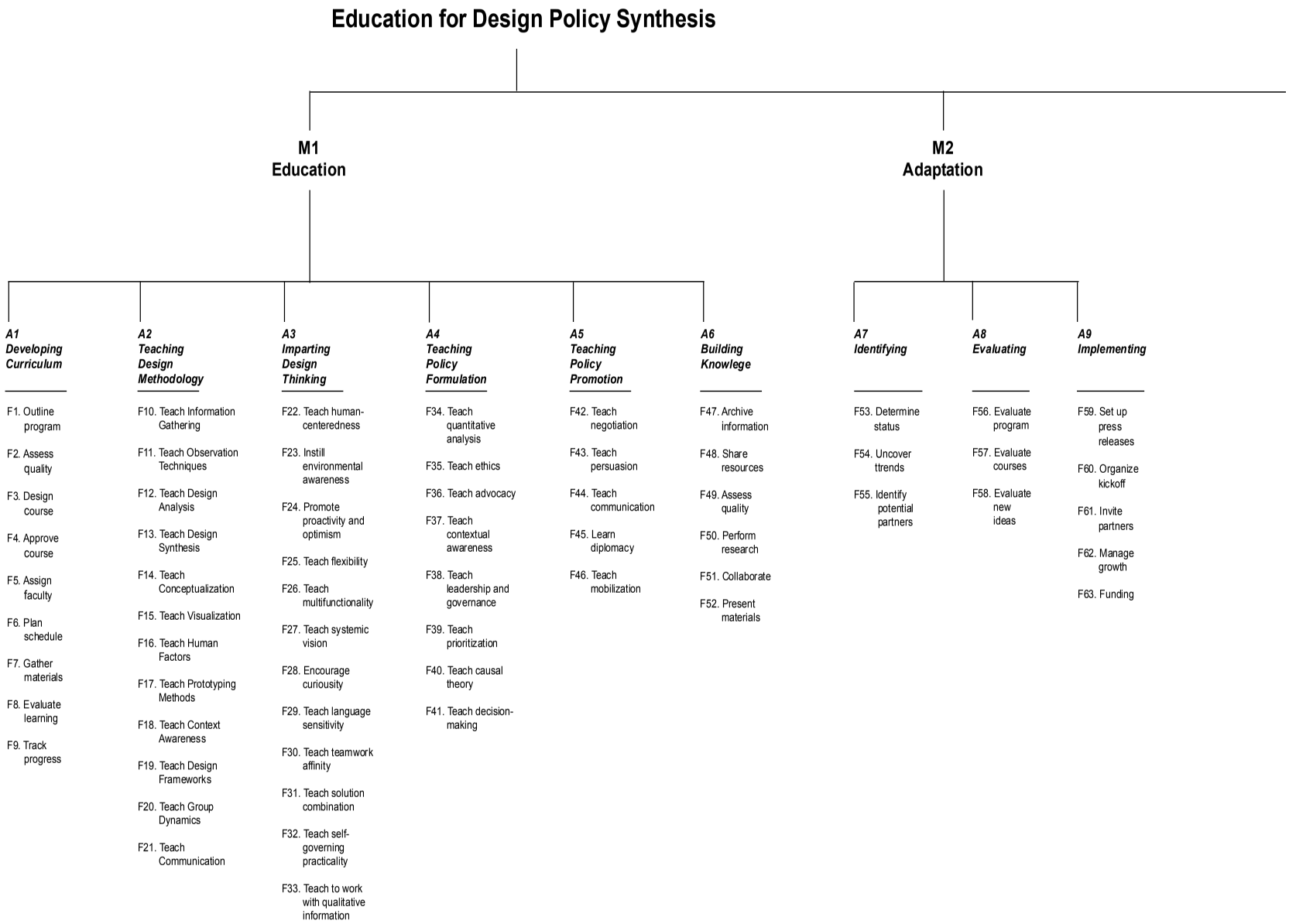
Surely, the conditions students analyze will be completely different at the time a student graduates and has the chance to work as an adviser, but being this conditions a transformation of the recent ones, any knowledge and expertise from the study of the previous conditions can become a bigger advantage at the time of adapting plans and policies to present conditions and tracking how this changing process has developed.

form: 9/19/2005

Version: **3** Date: 13 September, 2005 Date of first version: 7 September, 2005

Function Structure

Education for Design Policy Synthesis



Function Structure

Education for Design Policy Synthesis

Education for Design Policy Synthesis

M3 Communication

A10 Promoting

F64. Advertise program

F65. Coordinate with campaign program

F66. Give press interviews

F67. Place speakers

A11 Promulgating

F68. Recognize achievements

F69. Publish student work

F70. Publish faculty work

F71. Publish partnership products

F72. Publish research results

F73. Secure sponsors

F74. Nominate candidates

F75. Evaluate candidates

F76. Present awards

F77. Exhibit winners

A12 Hosting

F78. Host events

F79. Host exhibits

F80. Host people

F81. Exchange people

F82. Hosting organizations

A13 Building Relationships

F83. Qualify

F84. Discover

F85. Verify

F86. Establish

F87. Manage

A14 Exporting Influence

F88. Coordinate projects

F89. Form relationships

F90. Share thoughts with publications

A15 Importing Influence

F91. Host multi-functional workshops

F92. Invite policy makers

F93. Invite design professionals

M4 Administration

A16 Managing Organization

F94. Hire support staff

F95. Administer staff

F96. Manage finances

F97. Coordinate fundraising

F98. Develop record-keeping systems

F99. Manage academic resources

F100. Manage technology resources

F101. Coordinate satellites

F102. Design internal environment

A17 Managing Students

F103. Recruit students

F104. Admit students

F105. Provide admin support

F106. Support student activities

F107. Manage student exchanges

F108. Help students plan career path

F109. Place students in jobs

F110. Develop relationships

F111. Coordinate internships

F112. Evaluate alumni success

F113. Build alumni network

F114. Maintain alumni network

F115. Target related undergraduate institutions

F116. Develop application process

F117. Develop application evaluation process

F118. Support new students

A18 Managing Faculty

F119. Recruit faculty

F120. Support faculty

F121. Evaluate faculty

Activity Analysis

Activity: **Managing Organization** | **1**

Project
Education for Policy Design synthesis

Mode
Administration

Originator
Christine Kim

Contributors

Scenario

The administration manages and supports the organization's operating acivities.

Users (Players)	System Components (Props)	Environmental Components (Set)
Administration	E-mail	Meeting space
Board members	Telephone	Offices
Support staff	Computers	Library
Satellite schools	Software	Storage space
Vendors	Database	
Alumni	Library materials	
	Furniture	

Functions	Associated Design Factors
F81. Hire support staff	High turnover
F82. Administer staff	
F83. Manage finances	Insufficient funds to apportion
	Uncertain how to allocate funds
F84. Coordinate fundraising	Insufficient resources to solicit funds
	Lack of alumni participation
F85. Develop record-keeping system	Unsure how to integrate with university systems
F86. Manage academic resources	Resources not consolidated
F87. Manage technology resources	Insufficient quantity to accommodate students
F88. Coordinate satellites	Cultural or language barriers
	Consistency of curriculum
	Distance can be barrier to communication and collaboration
F89. Design internal environment	Insufficient funds to properly design and furnish interior

Version: **2** Date: 12 October, 2005 Date of first version: 29 September, 2005

Activity Analysis

Activity: **Supporting Students** | **2**

Project
Education for Policy Design synthesis

Mode
Administration

Originator
Christine Kim

Contributors

Scenario

Administration manages all activities related to the student's life cycle through the program, from recruitment to graduation and beyond.

Users (Players)	System Components (Props)	Environmental Components (Set)
Administration	Applications	Meeting space
Prospective students	E-mail	Presentation space
Admitted students	Mail	Reception
Alumni	Telephone	
References	Website	
Sponsoring companies	Databases	
Partnerhips/Affiliations		
Prospective companies		
Satellite schools		

Functions	Associated Design Factors
F90. Develop application process	Difficult to assess diverse backgrounds through standardized criteria
F91. Recruit students	Unable to target appropriate audience
F92. Accept students	Insufficient applicant pool
	Difficult to assess soft skills
F93. Provide student support	Inaccessible staff
F94. Develop student activities	Lack of student interest and participation
F95. Manage student exchanges	Distance can be communication barrier
F96. Help students plan career path	Students' career goals not aligned with advisor's knowledge
F97. Place students in internships/jobs	Insufficient external contacts
	Available opportunities and students' interests or skillsets not aligned
F98. Develop alumni network	Unable to contact alumni
F99. Evaluate alumni success	Inadequate alumni participation
	Difficult to determine success criteria

Version: **2** Date: 12 October, 2005 Date of first version: 29 September, 2005

Activity Analysis

Activity: **Supporting Faculty** | **3**

Project
Education for Policy Design synthesis

Mode
Administration

Originator
Christine Kim

Contributors

Scenario

The administration and board members collaborate on decisions regarding faculty recruitment and evaluation.

Users (Players)	System Components (Props)	Environmental Components (Set)
Administration	E-mail	Meeting space
Board members	Telephone	Conference rooms
Prospective faculty (adjunct and full-time)	Mail	Reception
Hired faculty (adjunct and full-time)	A/V equipment	
References	Databases	
Students	Website	
	Software	

Functions	Associated Design Factors
F26. Recruit faculty	Unable to find qualified potential faculty
	Qualified prospective faculty are already employed
F27. Support faculty	
F28. Evaluate faculty	Difficult to devlop evaluation criteria
	Resistance to process
	Insufficient student participation

Version: **2** Date: 12 October, 2005 Date of first version: 29 September, 2005

Activity Analysis

Activity: **Teaching Design Methodology** | **4**

Project
Education for Policy Design synthesis

Mode
Education

Originator
Christine Kim

Contributors

Scenario

Students are taught design thinking, design skills, and design methods to use as tools for policy planning.

Users (Players)	System Components (Props)	Environmental Components (Set)
Faculty Students Subjects	Whiteboards Markers Projectors Furniture Writing materials Cameras Computers Software Internet	Classroom Meeting spaces

Functions	Associated Design Factors
F10. Teach design thinking	Difficult to change thinking process
	Students have different levels of knowlege/experience
	Students have different comfort levels with ambiguity
F11. Teach context awareness	Difficult to teach sensitivity
F12. Teach information gathering	Evaluation and feedback may be subjective
	Difficult to teach students how to filter data for relevance
	Difficult to change behaviors
	Process is time-consuming
F13. Teach observation techniques	Difficult to teach students to remove bias
F14. Teach design analysis	Difficult to teach students non-linear thought process
F15. Teach design synthesis	Assessment can be subjective
F16. Teach conceptualization	Difficult to teach unstructured, divergent thinking
F17. Teach visualization	Difficult to teach students to see subtleties
F18. Teach human factors	Difficult to instill human-centered values
F19. Teach design frameworks	Difficult to determine when to use appropriate tool
F20. Teach group dynamics	Students may be resistant to teamwork
	Students may be uncomfortable with presentations
F21. Teach communication	Jargon may be a barrier to communication
	Difficult to teach listening skills

Version: **2** Date: 13 October, 2005 Date of first version: 29 September, 2005

Design Factor

Title: Importance of user-centered design not understood

1

Project
Education for Policy Design synthesis

Mode
Education

Activity
Imparting Design Thinking

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

Associated Functions

Teach focus on user-centered design

Observation

Because creativity normally is generated without an object in mind, students that come from other backgrounds than design don't consider the value of this approach.

Extension

User-centered design (UCD) is a philosophy and a process in which the needs , wants and limitations of the end user are given extensive attention at each stage of the design process.

Due to the education and the discipline of origin from many students, they don't perceive the benefits of embracing this approach. Common benefits are ease of use, efficiency, increased productivity, less amount of errors and reduced training time. Overall, the cost-benefit analysis of the application of user-centered design approach clearly demonstrates that is not so hard or costly to apply and its benefits are clearly major.

Students will clearly grasp the importance of it by having a first hand experience on user-centered design products compared with non-user-centerd design products (engineer-centered, business-centric, marketing-centric, etc.)

Design Strategies / Solution Elements

Specify Status: E Existing M Modified S Speculative

Design Strategies	Solution Elements	Status
Make students "suffer" bad design on their flesh	"Bad design experience" workshop	M
Demonstrate benefits of user-centered design	Presentation of best practices of user-centered design	E
	UCD and Redesign workshop	E
Compare user-centered design with artistic design	History of user-centered design	E

Version: 3 Date: October 9, 2005 Date of first version: September 28, 2005

Design Factor

Title: Hazardous environmental global situation underestimated by students

2

Project
Education for Policy Design synthesis

Mode
Education

Activity
Imparting Design Thinking

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

http://www.terradaily.com/2004/041019040024.95rx88xz.html

Associated Functions

Instill environmental awareness

Observation

Students underestimate the present global environmental situation and don't see how is related with policy design.

Extension

The present frenzy consumption of resources, the overpopulation and other dangers aren't valuated enough. The program has to convince the students morally that this is the right thing to do, not because of ethics but because of human survival. So when this policy designers will advise they will consider the environmental situation and will be able to do policy that has objective benefits on the population.

One common way of thinking is that the global warming and all this environmental threats affect the earth but does not affect people personally. This can be addressed by presenting to the students the effects of contamination in their bodies. Blood tests of 13 ministers from the European Union revealed they were contaminated with chemical pollutants from sofas, pizza boxes and pesticides. The program has to demonstrate that pollution is all around.

Design Strategies

Demonstrate facts about the ecological human footprint

Make students experience present pollution

Solution Elements *Specify Status:* E Existing M Modified S Speculative

- E Lecture by environmental specialist
- E Visit to local environmental endangered spots
- E Contamination Blood Test
- E Environmental hazards workshop
- E Analyze tap water

Version: **2** Date: October 8, 2005 Date of first version: September 28, 2005

Design Factor

Title: Unable to be enthusiastic and positive when designing

3

Project
Education for Policy Design synthesis

Mode
Education

Activity
Imparting Design Thinking

Originator
Enric Gili Fort

Contributors

Source/s
Team deliberations

Associated Functions
Promote proactivity

Observation

Students when envisioning solutions can't overcome the problem of not coming up with solutions because of the lack of agility to reconfigure solutions.

Extension

When facing the designing process, a very optimistic way of working is needed in order to make the project progress. An optimistic attitude makes the designer progress, especially when testing something. When a solution is put under test, an optimistic viewer will see other ways of improving the present setup while a more pessimistic will not be able to reconfigure and see the potentiality of success of the present.

So the objective here is to teach them to have confidence in the process of sketching and evolving from there. To see the potential of an existing proposal and freeze a status as a point to start building from.
One option would be Bricolage which is the practice of building "something made or put together using whatever materials happen to be available"

Design Strategies

Teach students to see design solutions as a combination of elements

Teach students to decompose the elements of a solution

Solution Elements

Specify Status: E Existing M Modified S Speculative

- E Prototyping workshop
- M Teach applied combinatory logic
- M Bricolage Workshop
- S Teach System decomposition / Deconstruction

Version: **2** Date: 11 October, 2005 Date of first version: September 28, 2005

Design Factor

Title: Unable to envision adaptive solutions

4

Project
Education for Policy Design synthesis

Mode
Education

Activity
Imparting Design Thinking

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

http://www.mycoted.com/creativity/techniques/synectics.php

Associated Functions

Teach flexibility

Observation

Because students have such a different background, and little creative skills, they have problems to craft solutions that are create to adapt the needs of the users.

Extension

Students have problems to understand the power of adaptive solutions.
An adaptive solution empowers users to modify an existing solution.
Some people find very hard to think about one things as multifunctional.

They think about something as an entity and not as the sum of its elements.
The crafting of adaptive solutions is based on envisioning and testing possibilities constantly and building on top of those.
The disciplines from which the students come may not require this skills and this mental exercise.

Design Strategies

Push students to take risks and fail

Teach combinatory methods for solutions

Solution Elements *Specify Status:* E Existing M Modified S Speculative

- E Bias for adaptivity
- E Teach Brainstorming tools (synectics, etc...)
- E Creativity and Innovation Workshop
- M Evolutionary Design Workshop

Version: 2 Date: October 13, 2005 Date of first version: September 28, 2005

Design Factor

Title: Inability to integrate several functions into one solution

5

Project
Education for Policy Design synthesis

Mode
Education

Activity
Imparting Design Thinking

Originator
Enric Gili Fort

Contributors

Source/s
Team deliberations

Associated Functions
Teach multifunctionality

Observation

Because of the inability to consider a solution as a system of elements that can be replaced, reconfigured or suppressed, it is very difficult to envision solutions that integrate features from different solutions.

Extension

Integrating several functions into one solution requires a control on the combination of elements. The process of refining and improving certain solution requires envisioning skills, prototyping skills and judgement skills. The power of this skills is related with the mental archive we have of possibilities seen in other places.

Solutions are not created from nothing. Creativity is based on knowing a lot of things and taking this as a database, provoke combinations, both conscious and unconscious that then can be evaluated and used as starting point for next redesign.

Design Strategies	Solution Elements (*Specify Status:* E Existing M Modified S Speculative)
Instill perspective changes to students	E Integration Design Class
Teach to pay attention and analyze	M Detailed Observation Workshop
Teach combine and evaluate elements	M Combination and Evaluation Workshop
	E Teach Design Patterns

Version: **2** Date: October 8, 2005 Date of first version: September 28, 2005

Design Factor

Title: Inability to see complex things as systems

6

Project
Education for Policy Design synthesis

Mode
Education

Activity
Imparting Design Thinking

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

Associated Functions

Teach systemic vision

Observation

Because people is not used to analyze the products or the things that they use and limit themselves to use it, it is difficult to perceive all the elements that compose an element.

Extension

A systemic vision is not easily acquired. To achieve this skill, some training has to undergo, to uncover new visions on the way to see things. Designers with experience have the ability to immediately decompose mentally something into pieces, to see exactly how it is made and how does it work.

This skill is generally achieved by curiosity, and average people don't have the curiosity to look at how things are done because their interest is not aimed at developing or improving things. People only question things when does go wrong.

Design Strategies	Solution Elements *Specify Status:* E Existing M Modified S Speculative
Expose students to different degrees of systems	E Workshop on systems analysis
Teach students to question how things are and work	M Decomposition workshop
Make students undergo the process of describing	M Detailed Description techniques workshop

Version: 2 Date: October 6, 2005 Date of first version: September 28, 2005

Design Factor

Title: Inability to see how other disciplines can improve their practice

2

Project
Education for Policy Design synthesis

Mode
Education

Activity
Imparting Design Thinking

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

Associated Functions

Encourage Curiosity

Observation

Students are focused on one specific field of practice and don't see the interest in acquiring knowledge from other sources other than their own practice.

Extension

Creativity is often based on confronting two different ideas and out of this provocation of thought, the creative mind can distinguish the potential of the free association. The potential of this associations is very related with the amount of ideas we can associate. Therefore the importance of knowing other disciplines knowledge.

Design is one of the few disciplines that does not specializes in a certain type of knowledge. In the contrary, the majority of the disciplines nowadays are becoming more and more narrowed in their scope of knowledge. Since many students to the program will come from other disciplines and most likely will be very specialized, it would be hard for them to set themselves in the mood to be open to other knowledge influences. Most students won't find it meaningful and even absurd to know a little bit of everything instead of a lot about one thing.

Design Strategies

Demonstrate them how other non-related knowledge can benefit their creativity

Instill curiosity for other disciplines' knowledge

Solution Elements *Specify Status:* E Existing M Modified S Speculative

E Present personalities profiles that had broad knowledge

M Case studies of how parallel knowledge led to insightful thinking

Version: 2 Date: October 10, 2005 Date of first version: September 28, 2005

Design Factor

Title: Lack of language fluency

8

Project
Education for Policy Design synthesis

Mode
Education

Activity
Imparting Design Thinking

Originator
Enric Gili Fort

Contributors

Source/s
Team deliberations

Associated Functions
Teach language sensibility

Observation

Because the background of the students is not in linguistics, they lack a command of language in order to clearly and precisely formulate reasoning.

Extension

Language fluency allows designers to articulate easily and concrete the reasoning. Language is a method to formalize and describe a thinking in a stable way.

Students may find difficult to articulate fluently with language because a lack of practice and agility to manage words, a lack of vocabulary that precisely describes what they want to say or the inability to construct complex phrases.

All this skills take time to develop and can't be taught. These have to be exercised along the time. But a clear demonstration of how powerful can be to precisely command the language can awake curiosity in students and after small exercises and practices they may get so interested that by themselves they will try to master the language skills.

Design Strategies

· Push students to use language as a tool

· Demonstrate relation between command of language and better reasoning

·Make students increase vocabulary

·Increase word agility

Solution Elements

Specify Status: E Existing M Modified S Speculative

- M Dialectics battle workshop
- M Peer to peer discussions
- E "Writing skills for designers" book
- S Linguistic puzzles and word games

Version: **2** Date: October 7, 2005 Date of first version: September 29, 2005

Design Factor

Title: Unable to collaborate in a team

9

Project
Education for Policy Design synthesis

Mode
Education

Activity
Imparting Design Thinking

Originator
Enric Gili Fort

Contributors

Source/s
Team deliberations

Associated Functions
Develop teamwork affinity

Observation

Because of the personal egos and selfish ways of working, some students can't seem to be able to collaborate

Extension

To work in a team is not enough to have complementary working skills. In order to successfully collaborate in a team, personal skills are required. The ability to listen when others are talking, to criticize constructively and find positive things in other people's comments, to be able to sacrifice oneself for the benefit of the group, to modify one's behavior to complement other teammates skills, etc.

Some students may not have be able to work in team for several reasons. Selfish and egoistic personalities will hardly never recognize their mistakes will be unwilling to support other people's ideas or acknowledge them as good, refuse to make extra effort and try to command and rule the strategy.

To change these people ways of working, it has to be demonstrated how ridicule these behaviors are and how counterproductive are for the team and its goals.

Design Strategies	Solution Elements (*Specify Status:* E Existing M Modified S Speculative)
Push students to collaborative experiences	E Outdoor strategy games weekend
Force students to deal with critical situations that can only be solved by the team working together	E Survival outdoor games
Demonstrate benefits of teamwork	M Teamwork
Teach to work constructively	E Edward de Bono´s six hats

Version: 2 Date: September 30, 2005 Date of first version: September 28, 2005

Design Factor

Title: Lack of inventiveness to integrate solutions

10

Project
Education for Policy Design synthesis

Mode
Education

Activity
Imparting Design Thinking

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

http://en.wikipedia.org/wiki/Combinatorial_principles

http://en.wikipedia.org/wiki/Rule_of_product

Associated Functions

Teach to combine solutions

Observation

Because of a lack of practice in creating hypothesis and testing them, students can't succeed in creating integrated solutions.

Extension

A major challenge for design thinking is to be able to combine the best of two solutions into one. This skill requires visualization skills in order to envision temporal solutions that work as hypotheses and then test how valid this solutions. The process of integration solutions is an iterative one. The refinement happens over and over and in each step the evaluation of the solution allows to extract the aspects that lead to a qualitative improvement of the solution.
The lack of inventiveness at the time of creating this solution is caused by several factors that affect the whole process. At its early stage, the inability to prototype or visualize a possible solution results in a creativity paralysis due to the incapacity to represent and formalize the desired solution. At the time of refining and see how solutions can work together, a lack of frameworks to combine solutions results in simplistic and weak solutions.

Design Strategies

Teach to represent solutions

Teach ways to combine solutions

Solution Elements *Specify Status:* E Existing M Modified S Speculative

E Representation Techniques Workshop

M Teach combinatorial principles and frameworks

Version: **3** Date: October 15, 2005 Date of first version: September 28, 2005

Design Factor

Title: Unable to self-govern practically

11

Project
Education for Policy Design synthesis

Mode
Education

Activity
Imparting Design Thinking

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

Associated Functions

Teach self-govern practicality

Observation

Students either come up with too practical solutions or just think about too inventive solutions that can't be put into practice.

Extension

In order to achieve the most inventive solutions but still be able to think within the borders of the practical requires a double process in the mind and a certain intuition of the middle point. In one hand, the designer has to be open to any idea that can address the problem but at the same time he has to find out the way to make this big idea match within the real constrains the solution has to adopt to.

Because of the lack of inventiveness and the risk to sound to dreamy, most students fail to think big. Their ideas are limited by the 'what is possible' instead of by the 'what would be desired'. This practicality is very often caused by a problem-solving thrive that pushes people to find most practical solution that may solve the problem, no matter how baroque, instead of the most simple and imaginative one. They have to be able to switch from a very practical creativity to a more imaginative creativity easily.

Design Strategies

·Impulse students to be exploration-driven

·Teach students different creativity roles

Solution Elements *Specify Status:* E Existing M Modified S Speculative

E Six hats of thinking from De Bono

S Creativity orientation workshop

Version: 1 Date: October 14, 2005 Date of first version: September 28, 2005

Design Factor

Title: Unable to consider qualitative information

12

Project
Education for Policy Design synthesis

Mode
Education

Activity
Imparting Design Thinking

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

Associated Functions

Teach ability to work with qualitative information

Observation

Because some students are trained to use scientific reasoning that deals with facts they are unable to manage ambiguous, abstract information that can't be explicitly categorized.

Extension

The use of qualitative information is very much required to be able to propose qualitative solutions that can always be improved and are neither true or false, right or wrong.

The fact that some people can't manage qualitative information is due to the fact that it has no physical consequences or they simply can not link this abstraction to anything else. This disconnectedness of the information is a characteristic that most people find difficult to deal with, specially because it has no direct relation or consequence with nothing explicitly.

The context that surrounds knowledge helps to establish a relationships environment where knowledge means something by itself and in relation with other pieces of knowledge.

Design Strategies

·Teach students to deal with ambiguity

·Teach students to explore the context of ideas

Solution Elements *Specify Status:* E Existing M Modified S Speculative

S Observable data workshop

Version: **2** Date: October 11, 2005 Date of first version: September 28, 2005

Design Factor

Title: Difficult to change thinking process

13

Project
Education for Policy Design synthesis

Mode
Education

Activity
Imparting Design Thinking

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

Associated Functions

Observation

The background from some students is very structured and very rigid and its very hard for them to think in other terms and using other frames.

Extension

By being a graduate program, students from many different backgrounds and very different ways of thinking find themselves in the same environment. Design thinking requires a very agile mind, open for exploration and able to deal with ambiguous terms and this may collision with other ways of thinking that students bring with them, like scientific thinking. To change this process is not easy and it is a real challenge, specially after spending several years in undergraduate school and having learned this processes so in deep.

While a progressive introduction to design thinking skills and attitudes would certainly provide a smoother thinking transition, this most likely will provide confusion and a mixing of processes. Besides, a longer learning process will make the students delay the full application of the design thinking principles to school projects and till then they will only see partial results of a partial application of the design thinking process. So most likely, the best way to provoke this change on the way of thinking is to subject students to a fast and intense course to incorporate new thinking tools ready to be applied.

Design Strategies

Immerse students in a fast think-changing process

Solution Elements *Specify Status:* E Existing M Modified S Speculative

S "Switch-thinking" week

Version: **2** Date: October 11, 2005 Date of first version: September 28, 2005

Design Factor

Title: Students have different comfort levels with ambiguity

14

Project
Education for Policy Design synthesis

Mode
Education

Activity
Imparting Design Thinking

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

Associated Functions

Observation

Due to the different background and expertise, students can't deal with ambiguity in the same way.

Extension

Students not familiar with the design-thinking way of dealing with ambiguity are more used to thinking practices that use structured processes that rely on true or false facts, but never with ambiguous terms. This represents a problem that many students may have at the time of approaching problem solving processes where absolute evaluation of the facts may not be possible and a more diffuse way of dealing with subjective facts will be needed.

One strategy to follow is to create a course that shows the students to question ambiguity against defined terms and by doing this they can end up defining ambiguity in relation with established known concepts.

Another one could be to introduce the students to the practice of decomposing an ambiguous concept in abstractions that may help them to make a cut into complexity. By analogy, students can try to find analogies or metaphors about related issues that may help them to comprehend better the inner elements of the issue at stake.

Design Strategies

·Teach students to deal with ambiguity

·Teach students to explore the context of ideas

Solution Elements *Specify Status:* E Existing M Modified S Speculative

S Compare/Test course

S Decomposition practice

Version: **2** Date: October 11, 2005 Date of first version: September 28, 2005

Design Factor

Title: Students have different levels of knowledge/experience

15

Project
Education for Policy Design synthesis

Mode
Education

Activity
Imparting Design Thinking

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

Associated Functions

Observation

Because the program accepts students from different backgrounds that may come with different levels of experience, the expertise and competence is not equal among program students.

Extension

A group of students with very different levels of experience can slow down the collective progress of acquiring and using knowledge, mainly because of questions asked, extra explanations and the fact that some material or processes have to be explained again, which may lead to disinterest from students that already know it.

In order to address that there are several strategies in order to neutralize this imbalance and make students all progress at once. Students can increase their experience by being provided with real life projects and real life constraints, forcing them to sharpen their knowledge and concentrate in a demanding environment.

Another tactical strategy that can prove beneficial is to create teams for special assignments that would combine different levels of expertise. This will make advanced students teach their knowledge while it will put pressure on laggards to catch up and make an extra effort.

Design Strategies

Make students learn from a real project and its constraints

Make students with more experience teach implicitly others with less experience

Solution Elements *Specify Status:* E Existing M Modified S Speculative

S Real-life projects workshop

M Experience-balanced teams

Version: **2** Date: October 11, 2005 Date of first version: September 28, 2005

Design Factor

Title: Not clear relationship's goal

16

Project
Education for Policy Design synthesis

Mode
Communication

Activity
Building Relationships

Originator
Enric Gili Fort

Contributors

Source/s
Team deliberations

Associated Functions
Define relationship's purpose

Observation

When a relationship is established it is not always clear which are the goals and motivations that drive its establishment.

Extension

In order to establish a relationship the first thing needed is to know what is desired from this relationship. Which are the benefits that are expected to be extracted. What is the aim of the effort of building a relationship. Very often the reasons are vaguely announced and not enough defined which may lead to unfulfilled expectations and disastrous relationships.

The reason why this definition is not done is because the talks about relationships are carried among top management levels that are more dedicated to carry external tasks and very often can't say no. If not handled with care, the inertia of a verbal agreement for a relationship can lead into its materialization without having been deeply considered.

One way to avoid this is to assign the power to define and manage the relationships to a group of technical people to oversee the terms of the establishment of the relationship.

Design Strategies

Give power to technical team to manage relationships

Solution Elements *Specify Status:* E Existing M Modified S Speculative

E Relationships committee

Version: **3** Date: October 10, 2005 Date of first version: 28 September, 2005

Design Factor

Title: No means to find potential candidates

17

Project
Education for Policy Design synthesis

Mode
Communication

Activity
Building Relationships

Originator
Enric Gili Fort

Contributors

Source/s
-Forrester Research

Associated Functions
Find relationship candidates

Observation

Because of the lack of knowledge about where is possible to find an institution or individual with the demanded characteristics, the program can not find the candidate that matches the requirements.

Extension

When the program has a need that thinks would be best met through a relationship, it has to find the most ideal candidate that will provide the best accord that will benefit the most.

At the time of finding a target interlocutor, there is a lack of knowledge of the skills and characteristics of potential candidates with who establish a relationship.

The information that is required in other to start evaluating the adequacy of the candidate is related with its interests, goals and future projection. This information is not evident or factual and can't be extracted from any directory or listing. Instead it has to be provided by informants that have a specific knowledge in the area and can provide a very valuable insight and envision possible alternatives.

Design Strategies

Find informant to provide suggestions

Solution Elements *Specify Status:* E Existing M Modified S Speculative

- E Policy Making Research firm 'a-la-Forrester-Research'
- E Policy maker informed observer on the payroll

Version: **2** Date: October 12, 2005 Date of first version: September 28, 2005

Design Factor

Title: No means to evaluate adequacy

18

Project
Education for Policy Design synthesis

Mode
Communication

Activity
Building Relationships

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

"Winning decisions" book.

Associated Functions

Choose ideal candidate

Observation

It is difficult to evaluate how adequate is a candidate because the lack of knowledge of the candidate interests

Extension

In order to evaluate how adequate a relationship can be in relation to others a criteria has to be established. The cause of the incapacity to decide whether a relationship will be beneficial or not is normally because of the lack of selection criteria.

In order to make an informed decision about whether is beneficial or not is a relationship, the most important aspects of the potential relationship have to be listed and weighted. Once this are clearly stated a comparison between the candidates can be created. The exercise to define the criteria on top of which the relationship will be based in a best case scenario will serve as a guide to make a quantitative evaluation of the possibilities of each candidate. Once this is done, and the candidacy is still the best one, now is time to evaluate if the relationship still will be beneficial.

Design Strategies

Use quantitative method to evaluate best candidate

Solution Elements *Specify Status:* E Existing M Modified S Speculative

E Decision taking matrix

Version: 2 Date: October 5, 2005 Date of first version: September 28, 2005

Design Factor

Title: Impossibility to reach an agreement

19

Project
Education for Policy Design synthesis

Mode
Communication

Activity
Building Relationships

Originator
Enric Gili Fort

Contributors

Source/s
Team deliberations

Associated Functions
Establish relationships

Observation

Because of different interests and perspectives is not possible to reach an agreement.

Extension

When trying to establish a relationship with a candidate, it may not have the same interest or needs to collaborate.
Two parties try to find ways to work together but the differences of demands and interests can bring the negotiation to failure. Both points of view are respectable and the negotiation process goes around critical points of disagreement and the way to bridge this divergences.

The ways to unblock negotiations is through third parties and persons that are not in the front line of the negotiation and don't feel the pressure of the public image. In non-official conversations and aside meetings the tone of the negotiation is more relaxed and offers can be pronounced more overtly.

Design Strategies

Negotiate agreements in parallel sessions

Solution Elements *Specify Status:* E Existing M Modified S Speculative

M Diplomatic 'undercover' negotiator

Version: **2** Date: October 6, 2005 Date of first version: September 28, 2005

Design Factor

Title: Relationship accords not fulfilled

20

Project
Education for Policy Design synthesis

Mode
Communication

Activity
Building Relationships

Originator
Enric Gili Fort

Contributors

Source/s
Team deliberations

Associated Functions
Manage relationships

Observation

Because of the fading interest from a counterpart or lack of resources the relationships accords are not matched.

Extension

The framework into which an agreement is signed is the one that could match the best case scenario.

While the relationship is ongoing there are many factors that can alter the normal development of the relationship inside the margins of the accords. The reason why the accords are not met are various but normally they are due to a lack of resources, dedication or interest.

In order to address this problem a continuous evaluation of the relationship has to be implemented to ensure that the relationship stays in healthy and is the result of the interest of both parties to maintain it.

Design Strategies

Check continuously relationship status

Solution Elements *Specify Status:* E Existing M Modified S Speculative

S Relationship tracker tool

Version: **2** Date: October 12, 2005 Date of first version: September 28, 2005

Design Factor

Title: No means to identify top players

21

Project
Education for Policy Design synthesis

Mode
Communication

Activity
Importing Influence

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

Associated Functions

Establish relations with top players

Observation

Because of the lack of knowledge of who is ruling the scene in policy making, the program is not sure who it has to invite to import influence.

Extension

When exposing the faculty and the students to key players in the field, the selection of who to target is very important. To identify who is playing a major role in the policy making can prove difficult if there is a lack of knowledge on who is setting the agenda in advancement of policy education and the application of design thinking in this domain. The cause of this is the opacity and the fact that the practice of using design thinking is not public. Therefore, there may be good practitioners there that are bringing a new perspective in policy making but are only known by few individuals in their organizations.
One way to approach this is to find how is being reference the most, both in published material and by fellow peers of profession.

Design Strategies

·Find most referenced actors

Solution Elements *Specify Status:* E Existing M Modified S Speculative

- E 'Policy Publications data cruncher'
- E Round of interviews with Policy Organization Leaders

Version: **2** Date: October 14, 2005 Date of first version: 28 September, 2005

Design Factor

Title: Unsure which is the most adequate approach

22

Project
Education for Policy Design synthesis

Mode
Communication

Activity
Importing Influence

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

Associated Functions

Establish relations with top players

Observation

Depending on the characteristics of the influencer, there is an uncertainty on how to approach the target in order to start to talk.

Extension

At the time of approaching a policy making leader to try to start a relationship, the way this is done can have a high effect on the response to the invitation. People in the policy making arena are more used to work in an interpersonal communication environment. It is also quite uncertain what is the most effective way to approach depending on the category or the position of the leader.
While a top figure will more likely to be willing to establish a relationship when approached by a skilled persuader, someone with a more technical background or more concerned about the more practical aspects of policy making will be most likely persuaded by someone with more knowledge about the practice.

Design Strategies

·Adapt approach depending on leader's field

Solution Elements *Specify Status:* E Existing M Modified S Speculative

M Public Relations manager

Version: 2 Date: October 13, 2005 Date of first version: September 28, 2005

Design Factor

Title: Lack of interest by top players

23

Project
Education for Policy Design synthesis

Mode
Communication

Activity
Importing Influence

Originator
Enric Gili Fort

Contributors

Source/s
Team deliberations

Associated Functions
Establish relations with top players

Observation

Top figures of the field of policy making are not interested in establishing relations with the program because they can't see the utility of it all.

Extension

The program wants to establish relationships with key leaders in order to bring in valuable knowledge so everybody within the academic context can benefit from it.

Key leaders are very busy and solicited figures and most likely will be willing to establish a relationship with the program because they have an academic interest on being related with the faculty, because they want to increase their prestige or because there is an economical benefit.

The program can articulate invitations to this key leaders where the event is both beneficial for the academic community because it has the chance to profit from their knowledge and for the key leaders because they have an extra reward besides lecturing which is to stay in touch with other influential leaders.

Design Strategies

·Offer academic prestige

·Offer networking environment

Solution Elements *Specify Status:* E Existing M Modified S Speculative

M Influential faculty

M Public experts/leaders roundtable

Version: **2** Date: October 14, 2005 Date of first version: 28 September, 2005

Design Factor

Title: Subjects of interest not matching

24

Project
Education for Policy Design synthesis

Mode
Communication

Activity
Importing Influence

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

Associated Functions

Promote faculty - leaders encounters

Observation

Faculty and leaders don't share the same subjects of interest

Extension

In order to establish fruitful professional relationships between faculty and leaders, a shared range of interest has to be shared between both parties. The faculty is very varied and the array of leaders available even bigger, so in order to establish relationships that can benefit both parties, a very initial effort has to be done to match the subjects of interest.

A simple analysis of each player can provide valuable information to base the pairing judgment on.

When a relationship is established with common interest from both sides, it can yield a more sincere and lasting relationship that will certainly benefit the process of incorporating external knowledge to the academic environment.

Design Strategies

Select in advance an ideal pairing

Solution Elements *Specify Status:* E Existing M Modified S Speculative

M Faculty-leaders matchmaker

Version: **2** Date: October 3, 2005 Date of first version: September 28, 2005

Design Factor

Title: No means to define subject

25

Project
Education for Policy Design synthesis

Mode
Communication

Activity
Importing Influence

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

Associated Functions

Invite influencers to persuade

Observation

Because there is no strategy in the program it is not clear what kind of lectures to host.

Extension

A lecture has to engage the potential audience and specially within policy design it has to deal with current trends and events.

A lecture has to be part of a more general strategy of importing influence and its content has to match the overall direction followed by the school. Within all the current trends, topics, discussion and tendencies within policy making, the program has to decide which ones have more importance both for the academic community and for the professional world.

A thorough and informed analysis of the current state of the policy making world can provide insightful information about the subjects that can attract more attention and can be more valuable for both the program faculty and the specially the students, since they are going to be the ones that will be giving advice in the near future in this subjects or in subjects that will stem from the present ones.

Design Strategies

Identify current hot topics

Solution Elements *Specify Status:* E Existing M Modified S Speculative

M Policy trends observer

Version: **2** Date: October 14, 2005 Date of first version: September 28, 2005

Design Factor

Title: Uncertain knowledge benefit for the program

26

Project
Education for Policy Design synthesis

Mode
Communication

Activity
Importing Influence

Originator
Enric Gili Fort

Contributors

Source/s
Team deliberations

Associated Functions
Learn from influence

Observation

After the event is over, and when trying to learn from the experience it is uncertain how the

Extension

While the influence is being exerted, is sometimes difficult to know what is valuable because there is no expert with enough context to evaluate the quality of what is being presented and while being a critical outsider.
The program has to learn from what has been presented, but since there is no person appointed to do so, the knowledge is gained by the people but in order for the institution to learn, someone on behalf of the program has to evaluate what the institution can learn from it

Design Strategies

·Examine influencer's content in advance

.

Solution Elements *Specify Status:* E Existing M Modified S Speculative

M Content Overseeing Committee

Version: **1** Date: September 28, 2005 Date of first version: September 28, 2005

Design Factor

Title: No means to decide best way to register

27

Project
Education for Policy Design synthesis

Mode
Communication

Activity
Importing Influence

Originator
Enric Gili Fort

Contributors

Source/s
Team deliberations

Associated Functions
Document influence

Observation

When multi format events are hosted to import influence is difficult to determine what's the best way to register it.

Extension

Importing influence can be translated into a transfer of knowledge. Due to time constrains and effort required this actions normally take the format of an event, which could take more than one day. When this events happen there is the need to register the event so more people besides the present ones can benefit. The fact that this events can take different formats such as lectures, workshops, demonstrations, etc. and that the knowledge that is going to be presented is shaped in very different formats makes it difficult to decide beforehand what's going to be the best way to capture it.

One way to avoid this problem is to be ready to register in a wide range of media formats. This will provide enough flexibility to accommodate fast and good to the event format.

Design Strategies

Enable multimedia capturing system

Solution Elements *Specify Status:* E Existing M Modified S Speculative

M Multimedia Recording Platform

Version: 1 Date: September 28, 2005 Date of first version: September 28, 2005

Design Factor

Title: No means to identify who to influence

28

Project
Education for Policy Design synthesis

Mode
Communication

Activity
Exporting Influence

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

Associated Functions

Identify targets to influence

Observation

Before starting any strategy to influence, the right people to be influenced has to be targeted. Unless there is thorough knowledge about the policy making world is difficult to identify the targets to influence.

Extension

In order to make a more efficient use of the resources when influencing, a good strategy is to identify from who the program can benefit the most and dedicate its efforts.

Deciding who to influence can prove difficult if the characteristics of the potential candidates are not known. Knowing who does what and understanding how the program can benefit from the influencing process is key to decide who to influence.

Based on the overall goals the program has for the influencing process, the specific profile of targets of influence will arise, and once this are clearly outlined, the program looks for the actor that most likely will receive the message and will likely use its own influence to convey the program's message.

Design Strategies

·Define ideal candidate properties

·Make interest public

Solution Elements *Specify Status:* E Existing M Modified S Speculative

S Ideal Candidate Profile

E 'Influencer Wanted' advertisement

Version: **2** Date: October 11, 2005 Date of first version: September 28, 2005

Design Factor

Title: No means to decide how to influence

29

Project
Education for Policy Design synthesis

Mode
Communication

Activity
Exporting Influence

Originator
Enric Gili Fort

Contributors

Source/s
Team deliberations

Associated Functions
Strategize how to influence

Observation

Unless a good knowledge of the different methods and channels to influence is well known, is very difficult to plan the influence process.

Extension

Depending on the type of target and the type of message that wants to be transmitted, the way to influence is very dependant on the factors that surround the goal. The act of persuasion and influencing is very particular and each case has to be treated individually. The action in itself has to be considered a one to one dialogue. Therefore, a thorough knowledge of the strengths and capabilities of the target is critical in order to evaluate which influencing method is more appropriate.

Having a range of influencing techniques and a way or process to decide which one to pick based on the specific target can prove helpful when confronted to take a strategy. Understanding what are the internal interests of the influenced and knowing to which stimulus they will react and change their behavior is very valuable at the time of deciding the influencing technique.

Design Strategies

·Collect influence methods and samples

·Tailor influencing methods for a specific target

·Adapt method based on past cases

Solution Elements *Specify Status:* E Existing M Modified S Speculative

M Influence Methods toolkit

E Relationships models database

Version: 2 Date: October 8, 2005 Date of first version: September 28, 2005

Design Factor

Title: Uncertain to confirm quality of execution

30

Project
Education for Policy Design synthesis

Mode
Communication

Activity
Exporting Influence

Originator
Enric Gili Fort

Contributors

Source/s

Design management journal "Hybrid organizations"

Associated Functions

Exert influence

Observation

When carrying an influence process, is hard to evaluate if the message is being received as expected.

Extension

To exert influence is a very delicate process and its execution has to be both well planned and well executed. Because the people involved in exerting influence work as a block and dedicate their time as a team to pursue the same goal, an external, neutral perspective is in much need to give feedback on how the process has been executed. Most often, the people more related with the project are not the most adequate to measure the quality of the execution.

To address this problem a figure that is nor an outsider either an internal member of the team can be free enough to provide sincere argumentation while not being an alien to the process. This model is taken from organizations that have hybrid innovation departments that enjoy freedom of action while having to report to the central organization. This makes them not dependent on the top management but can't be considered as external departments.

Design Strategies

·Supervise influence execution

Solution Elements *Specify Status:* E Existing M Modified S Speculative

M Hybrid influence overseer

Version: 1 Date: September 28, 2005 Date of first version: September 28, 2005

Design Factor

Title: No means to measure influence effect

31

Project
Education for Policy Design synthesis

Mode
Communication

Activity
Exporting Influence

Originator
Enric Gili Fort

Contributors

Source/s

Team deliberations

Associated Functions

Measure influencing results

Observation

After the influence process is over is not clear how effective the action has been.

Extension

The influence process is over, or maybe ongoing, and is time to evaluate the effect it is having on the target. This data is very valuable and its quality can have a great effect on the future planning of influence campaigns. The fact that this data is not easy to extract and the need of qualified people to do so is a reason why is difficult to measure how effective the process has been.

A formal and structured way of evaluating applied both in the moment prior to the influence exertion and right at the moment of the evaluation could well provide a more factual context were quantitative conclusions could be extracted.

Design Strategies

Compare previous and present factual status

Solution Elements *Specify Status:* E Existing M Modified S Speculative

E "Influence Comparator"

Version: 1 Date: September 28, 2005 Date of first version: September 28, 2005

Design Factor

Title: **No way to manage large amounts of data**

32

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Building Knowledge

Originator
Sarah B. Nelson

Contributors

Source/s
Personal Observation

Associated Functions
Archive information

Observation

As people research and assemble materials, the volume of information will grow. Collected knowledge becomes dissipated, difficult to locate and difficult to manage.

Extension

The open sharing of knowledge and experience is one of the core characteristics of an education institution. Instructors, researchers, and students possesses both a breadth and depth of information, resources, and tools. In addition, instructors rely on ready access to information to develop effective courses.

As research is performed or classes prepared, more resources are located and more tools generated. These discoveries may be useful to students, instructors, or partners. Ideas and resources may be informally shared but this process can be inefficient.

A central point for collective knowledge will both enrich collaboration and improve efficiency. The less time people spend looking for resources, the more time they can concentrate on teaching and learning.

Design Strategies

Hire someone to oversee information gathering and quality control

Develop a central place for all information

Provide multiple ways to store and access information

Solution Elements

Specify Status: E Existing M Modified S Speculative

- E Librarian
- M Resource Library
- M The Brain
- S Idea Workshops

Version: **3** Date: October 11, 2005 Date of first version: September 20, 2005

Design Factor

Title: **People may not contribute information**

33

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Building Knowledge

Originator
Sarah B. Nelson

Contributors

Source/s
Personal Observation

Associated Functions
Archive information
Share resources

Observation

Though people may intend or desire to share information with each, time constraints and poor tools may discourage this activity.

Extension

The information age has become well-established. Information in all forms is easy to access and challenging to store. Many electronic tools, like Knowledge Bases have cumbersome interfaces or suffer from a lack of participation. By looking at other ways people share information—storytelling, collaborating, casual conversation, performance—we can find ways to make information sharing central to the program's culture.

Design Strategies

Provide various methods for information sharing

Encourage casual conversations and collaboration

Encourage regular showcases of work

Solution Elements

Specify Status: E Existing M Modified S Speculative

- S Inspiration Board (physical)
- S Inspiration Board (virtual)
- S Soap box
- S Project Forum

Version: 3 Date: October 11, 2005 Date of first version: September 20, 2005

Design Factor

Title: **Quality is difficult to assess**

34

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Building Knowledge

Originator
Sarah B. Nelson

Contributors

Source/s
Personal Observation

Associated Functions
Assess Quality
Perform research

Observation

Research quality is difficult to assess, particularly in a largely qualitative discipline like design.

Extension

In this program, both students and instructors will participate in the development of new methods, the conducting of research, and the generating of new knowledge. This qualitative information is notoriously difficult to assess, yet quality of the program's output is crucial to its credibility.

The academic world has many methods for assessing research quality, including journal submissions, prestige of journals, peer reviews, and oversight committees. The program can adapt some of these ideas

Design Strategies

Provide formal methods of review by faculty, board members, or other selected reviewers

Use external area knowledge experts to vet work

Provide ways to test and refine research within the institution

Solution Elements

Specify Status: E Existing M Modified S Speculative

- M Project Forum
- M EPDS Showcase
- S Classroom Labs

Version: **2** Date: October 11, 2005 Date of first version: October 2, 2005

Design Factor

Title: **Users may be in different locations**

35

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Building Knowledge

Originator
Sarah B. Nelson

Contributors

Source/s

Personal Observation

Associated Functions

Archive information

Share resources

Perform research

Collaborate

Present materials

Observation

Program participants may perform coursework, research, or team activities from various locations.

Extension

Network technologies and the Internet have redefined where, when and how people work. In this program, many students and faculty members are also working professionals. They may do school work at home, at their office or even in another city or state. Since team work will be an important educational tool, facilitating collaboration over distances will be important.

Many tools that aid long-distance collaboration—e-mail, class extranets, electronic bulletin-boards, and chat—are ubiquitous. However, new tools can be developed to allow access to materials and teams from anywhere. This might include tools that allow teams to write collaboratively, to store ideas centrally, to check files in or out for individual work, or to track schedules, tasks, and assignments.

Design Strategies

Make reading, notes, and other class materials available anywhere

Facilitate teamwork, project management, collaborative idea generation and capture

Solution Elements *Specify Status:* E Existing M Modified S Speculative

- M Class Extranet
- S GroupThought
- S ThoughtJotter
- S QuickProject
- S FileTracker

Version: 1 Date: October 2, 2005 Date of first version: October 2, 2005

Design Factor

Title: **Materials are in different formats**

36

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Building Knowledge

Originator
Sarah B. Nelson

Contributors

Source/s
Personal Observation

Associated Functions
Archive information
Share resources
Collaborate
Present materials

Observation

Materials come in many formats.

Extension

In design, materials used in instruction, collaboration, and research can take many forms. From electronic media (text, video, images) to physical objects, these many formats pose a logistical challenge. This challenge is increased when students are in remote locations for part of the time.

It is important that the program gather, catalog, and make available these materials for classroom use.

Design Strategies

Provide multiple presentation methods

Provide a central location for the storage and sharing of various materials

Solution Elements *Specify Status:* E Existing M Modified S Speculative

- M Media Cart
- S Share Boards
- S Sample Library

Version: 2 Date: October 16, 2005 Date of first version: October 2, 2005

Design Factor

Title: **It is difficult to uncover needs**

37

Project
Education for Policy Design Synthesis

Mode
Adaptation

Activity
Identifying

Originator
Sarah B. Nelson

Contributors

Source/s
Personal Observation

Associated Functions
Assess Needs

Observation

Since an education program is a living thing, there are many opportunities for improvement, growth or change. Uncovering areas that need attention or identifying new areas for development takes insight and proactivity.

Extension

Continual assessment of existing activities and identification of gaps in offerings is crucial to the healthy growth of the program. Sometimes it can be difficult to step back from the day-to-day activities and view your work objectively. Requesting feedback and insight from many different sources can provide a rich picture both of what's going right and what needs improvement.

There is a natural tendency for human beings to avoid change, to tell others what they want to hear, or to not think critically. In addition, powerful social forces, including a fear of being ostracized or a fear of hurting someone's feelings can lead to inaccurate or partial assessments. It is important that self-reflection becomes a core value of the institution and that tools are made available to allow a free discussion and honest assessment.

Design Strategies

Develop forums where people in the organization can openly express constructive criticism

Use creative methods to allow unidentified needs to be uncovered.

Infuse the program with outside ideas and opinions.

Solution Elements

Specify Status: E Existing M Modified S Speculative

- S Needs assessment workshop
- S Future Vignette
- S TruthTime
- S EduExchange

Version: **1** Date: October 14, 2005 Date of first version: October 14, 2005

Design Factor

Title: **Prioritizing needs is difficult**

38

Project
Education for Policy Design Synthesis

Mode
Adaptation

Activity
Identifying

Originator
Sarah B. Nelson

Contributors

Source/s
Personal Observation

Associated Functions
Assess Needs

Observation

In a given institution, there are many needs. All require attention.

Extension

In any institution, there are constant needs for improvement, adjustment, or innovation. Many institutional groups may have competing interests. Judicious selection of resource recipients is crucial to the efficient operation and considered growth of the program.

The program must establish fair assessment and allocation practices to avoid the political turmoil and infighting that plague many institutions.

Design Strategies

Keep prioritization process transparent

Establish fair assessment guidelines

Solution Elements

Specify Status: E Existing M Modified S Speculative

S Projects In List

S Assessment Guidelines

Version: **2** Date: October 16, 2005 Date of first version: October 14, 2005

Design Factor

Title: **Trends are difficult to identify**

39

Project
Education for Policy Design Synthesis

Mode
Adaptation

Activity
Identifying

Originator
Sarah B. Nelson

Contributors

Source/s
Personal Observation

Associated Functions
Scan Environment
Assess Needs

Observation

Design and policy are both fast moving fields. Today's idea is tomorrow phenomenon. It is hard to predict the future and know which ideas, trends, or issue will become important for the program.

Extension

The early and accurate identification of trends and emerging issues is crucial to the program's ongoing relevance. The earlier a trend is noticed, the more likely it will be that the institution can proactively answer the need rather than scramble to react later.

The slow growth of a movement or the building importance of an idea are often difficult to notice without a major event or trigger. One must be patient and take the long view. Often, only time can tell the difference between fad-dish ideas and important trends. However, trends must be tracked over time and assessed for their usefulness to the institution.

Design Strategies

Record the progress of ideas over time — S TrendWatch

Provide mechanisms for establishing the importance to the institution of a trend in relation to others — S Trend Weighter

Solution Elements

Specify Status: E Existing M Modified S Speculative

Version: **1** Date: October 16, 2005 Date of first version: October 16, 2005

Design Factor

Title: **Scanning is often informal**

40

Project
Education for Policy Design Synthesis

Mode
Adaptation

Activity
Identifying

Originator
Sarah B. Nelson

Contributors

Source/s
Personal Observation

Associated Functions
Scan Environment

Observation

The Internet provides easy access to an enormous amount of information and ideas. Many people use the Internet and other resources to undertake informal research each day.

Extension

Though the Internet has made scanning for trends, ideas, and new information easier, this type of research is often performed in an ad hoc way. People may not realize that even casual readings of newspaper and magazine sites are research activities. This casual research is neither archived nor rigorously evaluated. Often, ideas and references located using this method are quickly lost and nearly impossible to recover.

Enabling program members to make their findings easily available to others could build both a research base of knowledge, a useful resource, and a healthy research community.

Design Strategies

Capture casual research

Identify groups of casual researchers that share interests and connect them with each other

Solution Elements

Specify Status: E Existing M Modified S Speculative

- M Gabber
- M Gabber LIVE
- S ScannerGang

Version: 1 Date: October 2, 2005 Date of first version: October 2, 2005

Design Factor

Title: **Information quality is difficult to assess**

41

Project
Education for Policy Design Synthesis

Mode
Adaptation

Activity
Identifying

Originator
Sarah B. Nelson

Contributors

Source/s
Personal Observation

Associated Functions
Scan Environment

Observation

We have unprecedented access to information and ideas but the quality of that information varies wildly.

Extension

Quality information from reliable sources is crucial to program's development. The Internet has brought all types of information into easy reach. However, that information varies significantly in quality and credibility. Though many professional academics are trained to recognize the credibility of sources, others in the organization may need to learn to properly evaluate their findings.

Design Strategies

Provide an evaluation methodology

Catalog credible resources

Solution Elements *Specify Status:* E Existing M Modified S Speculative

M InfoEvaluator

E ResourceList

Version: 1 Date: October 16, 2005 Date of first version: October 2, 2005

Design Factor

Title: **Priorities are unclear**

42

Project
Education for Policy Design Synthesis

Mode
Adaptation

Activity
Evaluating

Originator
Sarah B. Nelson

Contributors

Source/s
Personal Observation

Associated Functions
Establish priorities

Observation

Since an education program is a living thing, there are many opportunities for improvement, growth or change. With so many options, determining which areas to focus on can be challenging.

Extension

A clear set of priorities helps any group make better decisions, understand their goals, and perform more efficiently. These priorities can be used to determine schedules, allocate resources, and balance conflicting obligations. However, identifying areas of greatest needs then ranking their precedence over each other can be fraught with confusion and conflict. Providing a systematic way for groups to rapidly articulate goals then rank them in order could greatly reduce conflict within the group and allow them to move forward quickly.

Design Strategies / Solution Elements

Specify Status: E Existing M Modified S Speculative

Design Strategies	Solution Elements
Develop objective criteria for the ranking of priorities.	M Priority Suggestor
Provide methods for managing priority identification and ranking in a group setting	E Nominal Group Process
Communicate priorities to all members of the group	S PriorityCommunicator

Version: 2 Date: October 16, 2005 Date of first version: October 11, 2005

Design Factor

Title: **People may not participate**

43

Project
Education for Policy Design Synthesis

Mode
Adaptation

Activity
Planning

Originator
Sarah B. Nelson

Contributors

Source/s
Personal Observation

Associated Functions
Seek input

Observation

For various reasons, people may not wish to participate in

Extension

Seeking input from those affected by potential design decisions mitigates negative reactions to change and encourages a greater sense of ownership. However, busy schedules, conflicting projects, and information overload can all prevent even the most dedicated person from participating in improvement initiatives. Immediate demands often seem more pressing than planning exercises.

Persuasive stories and the promise of a well-run project with a reasonable workload can encourage more people to volunteer for these planning activities. Sensitivity to busy schedules and scheduling flexibility can further encourage participation as long as flexibility does not overtake regular, well-planned meetings.

Design Strategies	Solution Elements (*Specify Status:* E Existing, M Modified, S Speculative)
Communicate compelling stories	S Storyteller
Identify and invite people explicitly	S Personal Invitation
Run meetings efficiently	S Meeting planner

Version: 1 Date: October 16, 2005 Date of first version: October 16, 2005

Design Factor

Title: **Ideas may be unsuccessful**

44

Project
Education for Policy Design Synthesis

Mode
Adaptation

Activity
Planning

Originator
Sarah B. Nelson

Contributors

Source/s
Personal Observation

Associated Functions
Generate ideas

Observation

It is easy to come up with an idea but very difficult to come up with a successful idea.

Extension

During the planning stage, it is important to generate a lot of ideas and quickly test and evaluate them for full implementation. This iterative approach can identify problems much earlier in the process, avoiding major problems later. Using techniques borrowed from various areas of interface and product design, any idea can be rapidly prototyped, tested, and re-worked. The type of information received through this process is invaluable in preventing later mistakes and keeping ideas flowing.

Design Strategies

Rapidly iterate through concepts, test, and improvements

Use narrative techniques to envision idea

Solution Elements

Specify Status: E Existing M Modified S Speculative

M Concept Iterator

S Scenario Maker

Version: 1 Date: October 16, 2005 Date of first version: October 16, 2005

Design Factor

Title: **No means to assess idea quality**

45

Project
Education for Policy Design Synthesis

Mode
Adaptation

Activity
Planning

Originator
Sarah B. Nelson

Contributors

Source/s

Personal Observation

Microsoft/IDSA Designer Spotlight Series
Bill Moggridge, IDSA
Co-Founder, IDEO
"Designing Interactions"
November 16, 2005

Associated Functions

Generate ideas

Observation

Once an idea has been recorded, assessing the quality and viability of that idea is often an intuitive process.

Extension

Evaluating an idea does not have to be a largely intuitive activity. A good idea can be evaluated methodically, using well-established and widely accepted guidelines. This criteria includes credible research, appropriateness to the task at hand, and feasible given the resources, capabilities and competencies of the affected organization or system. An idea worthy of further development can be proven desirable using established design practices like iterative prototyping and user testing. Once implemented, the progress of the idea can be tracked over time and inform further modifications.

In an educational context, an new idea may include a new course, an evolved recruiting strategy, or revisions to the interior space. Though these ideas may seem to fall outside a traditional design concern, they can actually be thought of as design problems and approached systematically.

Design Strategies

Provide a method for quickly testing, evaluating, and adjusting ideas.

Develop tools that allow faculty and staff to evaluate new ideas, curriculum changes, or other experiments.

Solution Elements

Specify Status: E Existing M Modified S Speculative

M Idea Prototype

M Idea Evaluator

Version: **2** Date: November 16, 2005 Date of first version: October 16, 2005

Design Factor

Title: **People resist change**

46

Project
Education for Policy Design Synthesis

Mode
Adaptation

Activity
Implementing

Originator
Sarah B. Nelson

Contributors

Source/s
Personal Observation

Associated Functions
Measure success

Observation

Change can destabilize even the most robust communities.

Extension

It is a natural human behavior to approach change with caution and trepidation. This attitude both protects the community from negative events associated with destabilization but can also inhibit the positive growth of the community. Strategic adaptation of curriculum and processes to the design and policy trends will keep the program's offerings relevant and progressive.

One way to reduce negative reactions to change is to provide information and opportunities for community members to give input. A well-timed announcement combined with a formal, public presentation of a change plan can give people a chance to absorb and become comfortable with a new idea before being forced to confront it.

Sometimes a formal feedback process may actually impede progress, sending the community into a heated, even ugly debate. When planning to roll out a new process, curriculum component, or strategy, it is important to weigh the urgency carefully and solicit feedback judiciously.

Design Strategies

Provide ways for people to learn about change.

Provide ways for people to give input and voice concerns.

Solution Elements *Specify Status:* E Existing M Modified S Speculative

M Introduction forum

M MyVoice

Version: 1 Date: Nov. 19, 2005 Date of first version: November 19, 2005

Design Factor

Title: **Lecture deficient for Decision Making**

47

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Teach Policy Formulation

Originator
Steven Babitch

Contributors

Source/s

Journal of Political Science Education, Teaching and Learning Empathy: An Interactive, Online Diplomatic Simulation of Middle East Conflict, URL: http://taylorandfrancis.metapress.com/(5fb3eq55qxf0wob4vrfpae55)/app/home/contribution.asp?referrer=parent&backto=issue,4,9;journal,1,2;linkingpublicationresults,1:112901,1 asp?referrer=parent&backto=issue,4,9;journal,1,2;linkingpublicationresults,1:1

Associated Functions

Teach Empathy

Observation

Decision making is the process by which we assemble and understand information, evaluate and weigh options, and see consequences of actions taken. Learning how to make effective decisions is difficult if the only means of learning is done through lecture as opposed to "learning by doing."

Extension

When teaching decision making, an important topic relating to leadership and governance in the public policy arena, certain course formats may work more effectively than others.

Engaging in or experiencing first hand the process of decision making is an effective way of learning how to make effective decisions. This can be done using project based or simulation exercises. Supplementing this with lecture format such as case study evaluation (seeing how someone else made good or bad decisions) can create an even more beneficial experience.

Design Strategies

Find beneficial format to teach quantitative analysis

Solution Elements *Specify Status:* E Existing M Modified S Speculative

M QuantiLab

Version: 1 Date: 16 October, 2005 Date of first version: 16 October, 2005

Design Factor

Title: **Difficult to level student skill sets**

48

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Teach Policy Formulation

Originator
Steven Babitch

Contributors

Source/s

Institute of Design, Illinois Institute of Technology, Chicago, IL: Foundation Year - Immersion in Design

Associated Functions

Observation

Students entering the Education for Policy Design Synthesis program will enter with a variety of backgrounds including design, public policy, and perhaps other backgrounds. The varied backgrounds indicates the need to fulfill possible gaps in student skill sets.

Extension

Education for Policy Design Synthesis is a program that brings design thinking and method into the context of public policy. It is a Master's Degree from which graduates of the program enter the public policy arena as policy advisors or policy strategists. They will be able to advise all levels of government on how to address various issues relating to the policy. The expertise they bring is the methodologically innovative thinking unique to designers. In addition they will have a foundation of public policy domain knowledge with which they can easily assimilate into the public sector.

Policy making at its core is a generalist discipline and process. One can think of a traditional public policy degree as a version of an MBA for the public sector. Because Education for Policy Design Synthesis is the fusion of design with public policy, entering students may have a design background, policy background, or a combination of both. And because of this variety of backgrounds, EPDS must ensure that students are capable of handling the skills sets of both disciplines.

Design Strategies

Teach skills to level the field

Solution Elements *Specify Status:* E Existing M Modified S Speculative

E Immersions

Version: 1 Date: 25 November, 2005 Date of first version: 25 November, 2005

Design Factor

Title: **People avoid face to face communication**

49

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Teach Policy Promotion

Originator
Steven Babitch

Contributors

Source/s

Team deliberations

Associated Functions

Teach Communication

Observation

Because of the increase in other forms of communication such as email, text messaging, and other forms of "cyber-communication," people have trended away face to face communication.

Extension

People today increasingly shy away from face to face communication, and technology and the internet has helped this trend. Email, text messaging, and even the telephone have all minimized the use of face to face communication. But something is lost in this instance: the ability to communicate *effectively* face to face. We need to make sure our students learn the skills of face to face communication and teach them not to shy away from these opportunities. The most effective way to communicate an idea or persuade someone to believe in an idea is to communicate the idea before them. This is a critical skill when engaging in the policy making process because of the inherent nature ofconstant interpersonal communication nature of communication

Let's consider the example of a sales professional. It is the sales person's job to make clear the benefits of their product or service. Similarly, it is the job of a policy advisor to ensure he or she can clearly communicate his or her ideas effectively. Would a sales person choose to present in person or through other means? The answer 100% of the time is to present face to face. This is because of the high degree of social interaction and the intuitive gains one can realize when interacting with a person face to face. If the idea is communicated effectively, the result is a higher likelyhood of idea acceptance.

Design Strategies

Confront the problem

Solution Elements

Specify Status: E Existing M Modified S Speculative

- E Project Teaming
- E Negotitation Simulations

Version: **1** Date: 09 October, 2005 Date of first version: 09 October, 2005

Design Factor

Title: **Difficult to Teach Interpersonal Skills**

50

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Teach Policy Formulation

Originator
Steven Babitch

Contributors

Source/s

Associated Functions

Teach Negotiation
Teach Persuasion
Teach Communication
Teach Diplomacy

Observation

Teaching people interpersonal skills is no easy task because of the abstract nature of interpersonal skills. When dealing with this kind of challenge, it is appropriate to consider non-traditional techniques.

Extension

Planning, forming, and trying to promote policy is an exercise in how to interact with people, build rapport, and articulate ideas. Application of interpersonal skills,especially in public policy, involves the art of negotiation, persuasion, communication, and diplomacy. However, not everyone naturally possesses these soft skills. And those that often forget and must remember to use them because it is easy to forget about them when in the midst of a contentious delicate issue.

Teaching people to listen, understand, persuade, articulate, and building rapport are not taught explicitly in public policy programs. Teaching people how to understand others' perspective is not explicity taught in public policy educational programs, although negotiation courses come close when it comes to understanding another's perspective or motive. The problem that often occurs is the human tendency to be ethnocentric, which in effect prevents people from seeing another possibility. What's interesting is that design thinking, part of which involves being open-minded, intends to broaden perspective. The fusion of design thinking in the policy context may serve to prevent this situation from occurring.

Design Strategies

Ensure you cover and determine interesting means to teach interpersonal skills

Solution Elements *Specify Status:* E Existing M Modified S Speculative

M CommCamp

Version: 1 Date: 16 October, 2005 Date of first version: 16 October, 2005

Design Factor

Title: **Student difficulty with quantitative skills**

51

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Teach Policy Formulation

Originator
Steven Babitch

Contributors

Source/s

Johnson O'Connor Research Foundation, URL: www.jocrf.org

Associated Functions

Teach Quantitative Analysis

Observation

Students that lack the ability to quickly analyze information may have difficulty in learning quantitative analysis methods and skills.

Extension

What is difficult about teaching quantitative methods? The problem with teaching quantitative methods is the numerical nature of the topics can be difficult for some students to understand, especially those who lack quantitative skill sets. This may be especially true for non-policy students, e.g., students with primarily a design background.

According to the Johnson O'Connor Research Foundation, the ability to analyze quantitative information is an aptitude, and "Aptitudes are natural abilities for doing, or learning to do, certain kinds of things easily and quickly… your aptitudes have little to do with knowledge or culture, or education, or interests. They have to do with heredity." This is not to say that students who lack a high level of this aptitude cannot perform quantitative analysis, but it may be more difficult or it may take longer.d

When teaching quantitative analysis, it is essential that it is taught using formats and means that provide a beneficial situation and environment for students who lack this aptitude.

Design Strategies

Find beneficial format to teach quantitative analysis

Solution Elements *Specify Status:* E Existing M Modified S Speculative

M QuantiLab

Version: **1** Date: 16 October, 2005 Date of first version: 16 October, 2005

Design Factor

Title: **Unable to practice negotiation techniques live**

52

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Teach Policy Promotion

Originator
Steven Babitch

Contributors

Source/s

Rachel Klein, graduate of the Harvard Kennedy School of Government

Associated Functions

Teach Negotiation

Observation

Because negotiations are often considered to be a more tense event and the stakes are often high, it is difficult to ensure that you've taught someone how to negotiate well.

Extension

Negotiation is about gaining information. It is also about gaining knowledge about what the other parties know, what they don't, and how each piece of information can help or hinder each party.

In engaging in a negotiation, it is critical to understand what each party is trying to achieve, what each party's best alternative is, and what the other parties are bargaining with and why they would or would not collaborate on.

When teaching negotiation, the goal is to simulate as accurately as possible a situation in which two or more parties (or students/student teams) can engage each other in the process. In order to provide the desired atmosphere when teaching negotiation, the stage should be set such that you can provide all of the factors raised above. This could be provided in a simulated setting or through a situation in which students can participate in or "shadow" a real negotiation.

It is achieveable to provide a simulated setting, but the difficulty is in providing a situation that is happening in the real world now. Parties involved in a real world negotiation may be reluctant to have students participate.

Design Strategies

xx. Create live negotiation

xx. Set up real scenarios

Solution Elements

Specify Status: E Existing M Modified S Speculative

- S Negotiate Live!
- S Negotiation Apprencticeship
- E RealNegotiator

Version: **2** Date: 25 October, 2005 Date of first version: 17 September, 2005

Design Factor

Title: No Means to Assess Courses is Best-Suited for Program

53

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Developing Curriculum

Originator
Yanin Kasemkosolsri

Contributors

Source/s

- Interviewing Assistang professor. Dr Ruchiratana Mandachitara, Department of Marketing,Rhode Island University

- http://www.nicholas.duke.edu/programs/

- http://www.ksg.harvard.edu/main/programs.htm

Associated Functions

F1 Outlinge program

Observation

Since policy design education is a new course of study, many courses are guided to construct in the program. However it's hard to realize which courses should be put in the curriculum of the program

Extension

One of the most important issues to concern about education for policy design program is courses of the program.

Likewise other educational programs, some instructor has to conjecture the good planning of teaching and study courses, but some use the existing guideline. However, this is program is brand new, so constructors have to come up what they will be teaching and contribute their knowledge for students.

The presented problem is what way to approach the new course of teaching since all courses have not been indicated before. Therefore, it's the early stage -job for instructor to work on that.

Design Strategies

List out course to teach

Use outsource course outline

Solution Elements Specify Status: E Existing M Modified S Speculative

E Course proposal

E Use other institution's similar course outline

Version: 2 Date: 20 September, 2005 Date of first version: 17 September, 2005

Design Factor

Title: The faculty is hard to find.

54

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Developing Curriculum

Originator
Yanin Kasemkosolsri

Contributors

Source/s

- http://www.nicholas.duke.edu/people/faculty/
- http://www.worldpolicy.org/wpi/index.html

Associated Functions

F2 Assign Faculty

Observation

Since policy design is a new integrated program of study, it needs a lot of faculty to form the team and leads the instructions. However, there is a problem to search for a variety of instructors.

Extension

The policy design program combines of variety of pedagogic knowledges: policy study, design thinking, and interdisciplinary study. All these types of knowledge needs the qualified faculty in terms of academics and professional skills.

It is difficult to gain the fully distribution from different people. Some of them are full-time workers and working in the top-level work position. Some of them are now teaching in other institutions. Therefore, there should be any compromise solutions for the program to get some certified full-time faculty for the program and adjuct faculty as well.

Design Strategies

- Assign instructors to their specialty field
- Look for outsource faculty
- Look for divesity of lecturers
- Use other institution faculty

Solution Elements — Specify Status: E Existing M Modified S Speculative

- S Instructor Check
- M Hire Adjunct Faculty
- M Hire Outsorce Lecturers from Different Specialty
- S Send Students to Study Certain Courses in Other Institutions

Version: 2 Date: 10 October, 2005 Date of first version: 17 September, 2005

Design Factor

Title: Schedules Not Flexible

55

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Developing Curriculum

Originator
Yanin Kasemkosolsri

Contributors

Source/s

- http://www.ksg.harvard.edu/apply/
- http://www.nicholas.duke.edu/programs/
- http://id.iit.edu/grad/welcome.html

Associated Functions

F8 Plan schedule
F9 Track progress

Observation

Since the policy design program is designed for mid-career people both policy makers and designers. Most of them would not able to fit in the inflexible time schedule.

Extension

Policy makers and designers are the focus groups of the program. Most of them work in good position and it is difficult to make a sharp discussion in quitting job and going back to school. It will cause them losing good change from working. Even though, some people would might able to manage some of their time to join the program, they would have hard time scheduling their calendar for school and work.

Moreover some people do not live in different towns far away from school. If the schedule is fixed, it turns out to limit many prospective student interests of the program.

Furthermore, some of students are funded from their organizations of government department. For this reason, it's impractical for them to get employed without working at all.

Design Strategies

Manage time schedule

Students prefer their own schedule

Solution Elements

Specify Status: E Existing M Modified S Speculative

E Course Calendar

M Online Schedule

S Schedule Tailor

Version: 2 Date: 20 September, 2005 Date of first version: 17 September, 2005

Design Factor

Title: Coordinate with other sections

56

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Developing Curriculum

Originator
Yanin Kasemkosolsri

Contributors

Source/s

- Interviewing Assistang professor. Dr Ruchiratana Mandachitara, Department of Marketing,Rhode Island University

Associated Functions

F1 Outlinge program
F2 Assign Faculty
F3 Design Course
F4 Approve Course

Observation

The Policy Design program needs to be collaborate with other departments of the program in order to coordinate all curriculum development process.

Extension

In order to manage the curriculum development, it requires coordinating works with different sections such as administration, registrar office, and facility sections. Therefore, there should be the process to work on this. Otherwise, the course development would not completely fulfill.

Design Strategies

List out courses to teach

Instructor initiates courses

Identify who work well together

Solution Elements

Specify Status: E Existing M Modified S Speculative

E Co-Operating Team

S Timeline Formulation

E Pass Programming

Version: 2 Date: 10 Otober, 2005 Date of first version: 17 September, 2005

Design Factor

Title: Unable to Track Progress

57

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Developing Curriculum

Originator
Yanin Kasemkosolsri

Contributors

Source/s

- Team Deliberations

Associated Functions

F9 Track Progress

Observation

Tracking process is one issue to be concerned due to the couse's efficiency.

Extension

Although there are launching of program course, there should have been check process of the quality of the content of the class, how students response with the class offered, and other effects in terms of opportunity of improve courses in the future.

Design Strategies

Report the progress

Follow up the progress

Solution Elements

Specify Status: E Existing M Modified S Speculative

M Track Report

S Progression Group

S Trail Gauge

Version: 2

Date: 10 October, 2005

Date of first version: 17 September, 2005

Design Factor

Title: No means to determine speakers

58

Project
Education for Policy Design Synthesis

Mode
Communication

Activity
Hosting

Originator
Yanin Kasemkosolsri

Contributors
Sarah Nelson
Enric Gill Forte
Christine Kim
Steven Babitch

Source/s

Associated Functions

F71 Host events
F74 Exchange people

Observation

In order to host events of Education Policy Design Synthesis, one of the most concerning issues is lacking of qualified speakers to conduct conferences.

Extension

One of the most important issues in hosting events is finding qualified speakers for keynote or conduct lecturing.

Speakers are important issues to concern in hosting events because in many events, the program needs to host and give speeches or conduct conferences intellectual entities for other institutions, partnership, and students.

The present problem is no means or system providing to have qualified speakers or information system for providing contact data to track down speakers in each specific categories.

Design Strategies

Collect the contact information

List out the potential speakers

Solution Elements

Specify Status: E Existing M Modified S Speculative

- M Contact Database
- S Name Collector
- S Speaker Search

Version: 2 Date: 17 October, 2005 Date of first version: 17 September, 2005

Design Factor

Title: No means to get attention

59

Project
Education for Policy Design Synthesis

Mode
Communication

Activity
Hosting

Originator
Yanin Kasemkosolsri

Contributors
Sarah Nelson
Enric Gill Forte
Christine Kim
Steven Babitch

Source/s

Associated Functions

F71 Host events
F72 Host exhibits
F73 Host people
F75 Host organization

Observation

To host people to the events, sometime it's hard to get their attention to join the events.

Extension

Although the hosting team has good plan and well prepared in everything for hosting except not getting enough of people attention, it is risky for that hosting program to not succeed as they expected.

In order to invite people to join events, it is important that the team who encourages has to be able to provoke their thought and attention enough to participate with the program.

Design Strategies

Set up the team working on getting attention

Solution Elements

Specify Status: E Existing M Modified S Speculative

S Buzz Builder

Version: 2 Date: 17 October, 2005 Date of first version: 17 September, 2005

Design Factor

Title: No means to advertise

60

Project
Education for Policy Design Synthesis

Mode
Communication

Activity
Promoting

Originator
Yanin Kasemkosolsri

Contributors
Sarah Nelson
Enric Gill Forte
Christine Kim
Steven Babitch

Source/s
-

Associated Functions
F57 Advertise program

Observation

Since there is no means to adverstise the education for policy design program to press, prospective students, government departments and other institutions, it is difficult to use appropriate means to appraoch the solution.

Extension

Advertising program is important for communicating messages to wide-ranges audiences in order to deliver the objectives and benefits of the Education for Policy Design Synthesis program.

Without advertising program to be well-known among audiences, the program would hardly succeed in many areas. For example, none of the instiutuions and organizations knows what Education for Policy Design Synthesis is, the program might not get any sponsor or collaboration progress from any institutions or organization.

Moreover, the initial program has to build its reputation, credibility through propaganding the goal of the program and how qualify of the program is to public. In addition, people would give supports to whatever they realize that's good thing and vital for them

Design Strategies

Create promotion team

Solution Elements

Specify Status: E Existing M Modified S Speculative

S P.R. builder

Version: 2 Date: 17 October, 2005 Date of first version: 17 September, 2005

Design Factor

Title: No means to coordinate with campaign program

61

Project
Education for Policy Design Synthesis

Mode
Communication

Activity
Promotion

Originator
Yanin Kasemkosolsri

Contributors
Sarah Nelson
Enric Gill Forte
Christine Kim
Steven Babitch

Source/s
-

Associated Functions
F58 Coordinate with campaign

Observation

Because Education program has to advertise the program through many channels in various approache, there is no means to coordinate with campaign program in order to figure out strategy solutions.

Extension

In order to run promoting program through a variety approaches, it is critical to concern how to accomplish the success of the project. Without coordinating with campaign program seems rarely to reach the success point, because there are many steps to be planned ahead. If there isn't well coordination with the campaign program, it is likely that project would not have the best promotion outcomes. It would be able to complete all aspects of promotion.

Collaboration with campaign team is neccessary in order to share the same goal : both short-term, and long-term goals. In addition, the important messages, datas and agendas will be passed to the campaign team. Therefore, they will able to understand, enable to plan and continue their jobs without losing intention or disconnecting communication.

Design Strategies

Conduct meeting with campaign team

Gather campaign data

Solution Elements — Specify Status: E Existing M Modified S Speculative

M Coordinate meetings

S Strategic agenda sharer

S Clipper Keeper

Version: 2 Date: 17 October, 2005 Date of first version: 17 September, 2005

Design Factor

Title: Not appropriate person

62

Project
Education for Policy Design Synthesis

Mode
Communication

Activity
Promotion

Originator
Yanin Kasemkosolsri

Contributors
Sarah Nelson
Enric Gill Forte
Christine Kim
Steven Babitch

Source/s
-

Associated Functions
F59 Give press interview
F60 Place speaker

Observation

Promotion program needs person to represent and give press interview, but there is lack of the appropriate person to take the confronted role. Moreovers, there is no appropriate person who understand and capture all pictures of the program.

Extension

It is difficult to deliver all consistant information for press in various time from many people. Due to the lack of the person who knows all informations including previous and current datas, the credability of speaking and spreading out the strong messages has been declined.

In order to convey messages, person need to communicate with convincing messages, and impress audiences with sounds, and the content of the story.

The assigned representing team to viewers is needed. Also, they have to be able to impart messages to public precisely, and constructively.

Design Strategies

Find the appropriate person from valuable sources

Solution Elements Specify Status: E Existing M Modified S Speculative

M Speaker database

Version: 2 Date: 17 October, 2005 Date of first version: 17 September, 2005

Design Factor

Title: Communication goals are unclear

63

Project
Education for Policy Design Synthesis

Mode
Communication

Activity
Promulgationg

Originator
Yanin Kasemkosolsri

Contributors
Sarah Nelson
Enric Gill Forte
Christine Kim
Steven Babitch

Source/s
-

Associated Functions
F61 Recognize achievement
F64 Publish partnership products

Observation

It is difficult to communicate for both short and long term goals, if the communication goals are unclear.

Extension

After the program becomes well-known, it still need the continuous communication in words and activity to viewers in order to increase prestige, extend the reputation of the program, emphasize the strong standpoint of the program

It is impractical to convey any message to viewers if the person doesn't know the whole content of the promotion purposes and objectives. Also, It is likely that it might lead in the wrong perception about the program.

Creative team can help to ease the problem in terms of being responsible for uiform promulgating the essence of every message to audience.

Design Strategies

Create promotion team

Solution Elements Specify Status: E Existing M Modified S Speculative

S Content Strategist

Version: 2 Date: 17 October, 2005 Date of first version: 17 September, 2005

Design Factor

Title: **Difficult to teach sensitivity**

64

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Teaching Design Methodology

Originator
Christine Kim

Contributors

Source/s

Personal observation

Associated Functions

F18. Teach Context Awareness

Observation

Understanding context requires people to be sensitive to the situations, people, and relationships involved, but for those who have not had to be sensitive in these situations, they do not see or understand its value.

Extension

There is no formula or method to teach sensitivity, but it is a soft skill that is necessary in the design process. In order to observe and analyze behaviors, the person must be able to put themselves in other people's shoes and to think and feel like someone else. It is not an easy trait and quality to learn and will take lots of practice.

Students who do not understand how to observe and analyze behaviors, observations, and thought processes will have difficulty understanding human needs, identifying problems associated with those needs, and coming up with design solutions to address those problems. Becoming sensitive to user needs will require one to become self-aware and practice techniques that will put themselves in situations to expose them to other people's perspectives. Changing this behavior will require repetitive exposure and practice to eventually become a natural process.

Design Strategies

Provide a method to place students in different scenarios to observe and analyze behaviors, and thought processes.

Solution Elements *Specify Status:* E Existing M Modified S Speculative

E Scenario Training

Version: **3** Date: 25 October, 2005 Date of first version: 17 September, 2005

Design Factor

Title: **Difficult to change behaviors**

65

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Teaching Design Methodology

Originator
Christine Kim

Contributors

Source/s

Personal observation

Associated Functions

F10. Teach Information Gathering
F11. Teach Observation Techniques

Observation

In order to change behaviors required for primary research, students must become aware of their words and actions and how these behaviors influence a primary study. To be able to obtain unbiased information, students must be open and willing to change current behaviors by repeatedly putting the new behaviors into practice.

Extension

People have created habits in speech and actions that have developed over time. Changing these habits require extraordinary effort. It requires a constant assessment of one's own actions and an understanding of how behaviors influence others. Ethnographic research is a type of primary research that is valuable in uncovering users' unmet needs. Practicing ethnographic research requires changing the manner in which the researcher asks questions. The researcher must also develop good listening skills and be extremely observant. If students do not enter the program with these skills, these will need to be taught through practice, critique, and repetition.

Design Strategies

Provide situations where students are immersed in a new experience

Provide work-study opportunities in the field

Solution Elements *Specify Status:* E Existing M Modified S Speculative

S Immersion

E Field Study

Version: **3** Date: 25 October, 2005 Date of first version: 17 September, 2005

Design Factor

Title: **Evaluation may be subjective**

66

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Teaching Design Methodology

Originator
Christine Kim

Contributors

Source/s

Personal observation

Associated Functions

F10. Teach Information Gathering
F12. Teach Design Analysis
F13. Teach Design Synthesis

Observation

When dealing with topics where there are no exact answers, it is difficult to evaluate progress in a manner that seems objective.

Extension

It is very easy to determine how much has been accomplished when measuring progress on things that are quantifiable. Gauging progress on a qualitative scale, however, is less clear, as there is no clear and definitive method of evaluation.

Design is a creative process that tends to appear subjective even if there are objective criteria used for evaluation. Different professors may provide different feedback for the same assignment, which can make it confusing for the student to determine which direction to follow. Understanding the criteria for evaluation upfront can limit these confusing states, as well as provide students with an understanding of areas to focus on, things that are important, and the purpose of a course. By creating criteria that the student will be evaluated on, expectation will become clearer and evaluations will appear less subjective.

Design Strategies

Provide explicit criteria and measurements for grading

Solution Elements *Specify Status:* E Existing M Modified S Speculative

E Criteria Grading

Version: **3** Date: 25 October, 2005 Date of first version: 17 September, 2005

Design Factor

Title: **Difficult to change thinking process**

67

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Teaching Design Methodology

Originator
Christine Kim

Contributors

Source/s

Personal observation

Associated Functions

F14. Teach Conceptualization
F13. Teach Design Synthesis

Observation

It is difficult for people to change their thinking process after having thought a certain way their entire life. Design thinking requires a different thinking process that people will need to adopt in order to think creatively.

Extension

Not everyone in the program will think the same way. While the students may have common backgrounds and goals, the ways in which they think may be completely different. Adhering to only one way of thinking can result in an overly narrow focus or perspective that may hinder the design process.

When learning a new process, one must be open to changes, including a change in the thinking process. Students will need to let go of how they currently understand the world and how they frame problems in order to be open to new ways of thinking.

While it is difficult for students to change their way of thinking, it is equally difficult for professors to teach students to change the way they think. Accomplishing this goal requires professors to communicate the value of the new way of thinking. Only then will students be open to the benefits gained by the new approach.

Design Strategies

Provide exercises akin to visual brainstorming to develop solutions to a design problem

Provide simulated environment for students to apply what they have learned

Solution Elements *Specify Status:* E Existing M Modified S Speculative

E Charette

E Simulation/Mock trials

Version: **3** Date: 25 October, 2005 Date of first version: 17 September, 2005

Design Factor

Title: **Difficult to instill human-centered values**

68

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Teaching Design Methodology

Originator
Christine Kim

Contributors

Source/s

Personal observation

Associated Functions

F16. Teach Human Factors

Observation

To be human-centered, designers must work with humans as their client, considering human factors and other unmet human needs. Students whose previous work focused only on business needs rather than human needs may have a difficult time shifting their values to be directed towards humans and society.

Extension

Having a human-centered focus means to have a desire to improve the lives of people through one's work. In order to accomplish this, students must be able to put themselves in other people's shoes, which requires the skill of empathy. Without understanding people and their perspective on things, students will not be able to understand what people value, which is required for good design.

Creating this human-centered value is a difficult thing to teach if the student does not already possess this motivation. Changing an internal value requires students to possess an open-minded attitude to learn about and appreciate the value a human-centered approach brings. Professors must strive to not only teach students what human-centered design is, but also convey the value it brings to good design. Building an awareness of how a human-centered approach can improve people's lives, which includes the students' own lives, may sensitize students to the issues people face from designs that are not human-centered.

Design Strategies

Provide online discussion area for students and faculty to talk about issues

Solution Elements *Specify Status:* E Existing M Modified S Speculative

M BlogChat

Version: **3** Date: 25 October, 2005 Date of first version: 17 September, 2005

Design Factor

Title: **Students may be resistant to teamwork**

69

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Teaching Design Methodology

Originator
Christine Kim

Contributors

Source/s

Personal observation

Associated Functions

F20. Teach Group Dynamics

Observation

People who are used to working independently may resist a teamwork setting, discounting or dismissing feedback on their work.

Extension

Teamwork is an integral part of the design process. A collaborative effort by a team often brings better results than the efforts of one individual. Bringing people from different backgrounds and experiences together brings different perspectives and approaches to a design problem. These ideas generated can be evaluated from multiple perspectives, and improved with contributions from others. Working collaboratively helps teams build on ideas to create a more robust solution.

For those who have worked in teams, but not ones in which have had a truly collaborative nature, this environment can be frustrating. Having had a negative experience with teamwork, students may choose to work independently whenever given the opportunity. The skills acquired through collaborative teamwork are often not evident or understood until much later. Experiencing a positive teamwork environment can help students appreciate the value collaboration brings to a design solution. Professors should teach students to be aware of negative behaviors that contribute to ineffective teamwork.

Design Strategies / Solution Elements

Specify Status: E Existing M Modified S Speculative

Design Strategies	Solution Elements
Provide tests for students to analyze strengths/ weaknesses	E Self Diagnostic Tests
Use collaborative projects to engage students in teamwork	E Collaborative Projects
Engage students in a fun experience that requires them to rely on the skills of team members	E Scavenger Hunt

Version: **3** Date: 25 October, 2005 Date of first version: 17 September, 2005

Design Factor

Title: **Resources not consolidated**

70

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Teaching Design Methodology

Originator
Christine Kim

Contributors

Source/s

Personal observation

Associated Functions

F99. Manage Academic Resources
F100. Manage Technology Resources

Observation

Academic and technology resources are often duplicated or dispersed, making it difficult and time intensive to locate the resource when needed.

Extension

Having a centralized, organized resource database is key to having an efficient record-keeping system where important information can be accessed quickly and efficiently for reference or administration purposes. The process for gathering information for this system is often cumbersome, which is why centralized databases may often go underutilized.

Students and faculty need an efficient way to easily store and access academic and technical resources. The system needs to be organized to minimize the effort required to use the system and should be available from multiple access points.

Design Strategies

Provide a centralized system where academic and technical resources may be accessed.

Provide technology credit that allows students to purchase needed resources at a discount

Solution Elements

Specify Status: E Existing M Modified S Speculative

- E Existing systems of parent institution
- M Resource Collect
- M Technology Credit

Version: **3** Date: 25 October, 2005 Date of first version: 17 September, 2005

Design Factor

Title: **Difficult to assess soft skills**

71

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Teaching Design Methodology

Originator
Christine Kim

Contributors

Source/s

Personal observation

Associated Functions

F103. Recruit students
F104. Admit students

Observation

It is difficult to evaluate applicants in their thinking process and soft skills through an application process.

Extension

The application process is good at gathering basic facts about the applicant, motivations for applying to the program, and their abilities in certain tested subject areas. Important qualities that are needed for design, such as communication, empathy, listening, and observation skills are much more difficult to assess. These skills cannot be evaluated on paper, but rather through conversation and careful observation. An interview may provide insight into some of these characteristics, but often a more thorough process is required to determine the level of these traits that an applicant might possess.

An applicant that is admitted based on their background experience and other written information on their application may struggle in the program because they lack some of the core soft skills required to succeed in the design environment. If they are unable to get along with other students, lack the communication skills to get their thoughts across, or lack the ability understanding other people's perspectives, they may have difficulty working in teams and contributing to a productive working environment. Their design work could also suffer from negative feedback from their peers. An applicant's ability to be flexible, open-minded and optimistic are some of the additional qualities required to be successful in a design environment.

Design Strategies

Solution Elements *Specify Status:* E Existing M Modified S Speculative

Design application process that can assess how applicants work with others to gain more insight into their working styles and soft skills they may possess.

- E Required interviews
- E Behavioral interviews

Host offsite open houses in different cities to attract potential applicants

- E Offsite open house

Version: **3** Date: 25 October, 2005 Date of first version: 17 September, 2005

Design Factor

Title: **Insufficient external contacts**

72

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Teaching Design Methodology

Originator
Christine Kim

Contributors

Source/s

Personal observation

Associated Functions

F108. Help students plan career path
F109. Place students in jobs
F110. Develop relationships
F111. Coordinate internships
F112. Build alumni network

Observation

If the program does not have a sufficient external contacts, the students may not have the opportunity to find good jobs after graduation.

Extension

External contacts are an important source of jobs and opportunities for students to apply what they learned in the program. If students sacrifice their time and money to attend the program, only to find the working community to be unreceptive to their contributions, the program will lose credibility. The program must cultivate external contacts and teach them about the value of the contribution its students can make to the prospective workplace environments.

Developing good external relationships with organizations and companies is essential to attracting good students, and will also help generate additional interest from the public. It raises the visibility of the school's program within the community. Alumni can also be an important source for contacts for the school. Alumni that perform exceptionally in their work environment indirectly promote the program and foster additional contacts for the program.

Design Strategies	Solution Elements (*Specify Status:* E Existing, M Modified, S Speculative)
Provide a tool that enables students to assess their aptitudes and how they match with potential career opportunities they are interested in.	S CareerMatcher
Host networking events and opportunities for students and the administration to meet potential employers.	E Networking Events
Provide a central database that tracks skills necessary for a for potential job opportunities	M SkillNet

Version: **3** Date: 25 October, 2005 Date of first version: 17 September, 2005

Design Factor

Title: **Difficult to develop evaluation criteria**

73

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Teaching Design Methodology

Originator
Christine Kim

Contributors

Source/s

Personal observation

Associated Functions

F121. Evaluate faculty

Observation

Existing faculty evaluation methods are not useful in gauging a faculty member's performance to improve the effectiveness of their teaching methods and style.

Extension

Faculty evaluations are primarily conducted in survey form at the end of a term and have broad criteria in which to assess a professor's performance. Whether this feedback is actually used to change the course for the following year is not clearly evident to students. These evaluations would be more useful to current students if conducted periodically within the semester so that the professor can see what improvements can be made to the course while the course is in progress. Making changes immediately will improve the students' learning experience as well as help the faculty member gain feedback on which methods are working and which are not.

Criteria for evaluation are typically developed from the program's main educational institution and tend to be generic in nature. To benefit students, these evaluation criteria should be developed with the input of students and what their expectations are for a particular course. Because different courses require different teaching styles and methods, the criteria for each course may be different. A combination of criteria provided by faculty as well as students regarding their expectations and objectives for the course can create improved courses, a stronger curriculum, and a better learning experience for students.

Design Strategies

Provide a dynamic criteria generator for courses that would include input from students.

Solution Elements

Specify Status: E Existing M Modified S Speculative

E Custom Feedback

Version: **3** Date: 25 October, 2005 Date of first version: 17 September, 2005

Solution Element

Status: ☐ Existing ☒ Modified ☐ Speculative

Title: **Knowledge base**

1

Project
Education for Policy Design Synthesis

Mode
Education

Activity
Building Knowledge

Originator
Sarah B. Nelson

Contributors

Description

A repository of electronic-bsed information generated or used by students, instructors, or researchers. Items are added to the Knowledge Base by community members and accessed by anyone in the community, anytime, from anywhere.

Source *(if existing or modified)*

Existing model

Properties - what it is:

A web-based electronic library of institutional knowledge

May use WIKI technology

Features - what it does:

Stores electronic documents

Users can add, edit, and delete items

Users can search, print, and download items

Users can access items from anywhere at anytime

Users can annotate or comment on other's posts

Users can save items they find to their own library of documents within the system

Associated Function/s

Archive Information

Source Design factor/s

No way to manage large amounts of data

Version: 2 Date: October 2, 2005 Date of first version: October 2 , 2005

Solution Element

Status: ☐ Existing ☒ Modified ☐ Speculative

Title: **The Brain**

2

Project
Education for Design Policy Synthesis

Mode
Education

Activity
Building Knowledge

Originator
Sarah B. Nelson

Contributors

Description

A repository of electronic-bsed information generated or used by students, instructors, or researchers. Items are added to The Brain by community members and accessed by anyone in the community, anytime, from anywhere.

Source *(if existing or modified)*

Existing model

Properties - what it is:

A web-based electronic library of institutional knowledge
May use WIKI technology
Stores electronic documents
Users can add, edit, and delete items
Users can search, print, and download items
Users can access items from anywhere at anytime
Users can annotate or comment on other's posts
Users can save items they find to their own library of documents within the system
To ensure quality, some items, like team projects or research, must be endorsed by an impartial third-party (see

Features - what it does:

Provides a central location for combined community knowledge.

Gives institution a memory, so future projects can grow from rather than retread the same ground.

Provides some quality assurance through an endorsement system.

Aids program development and assessment by providing a central resource

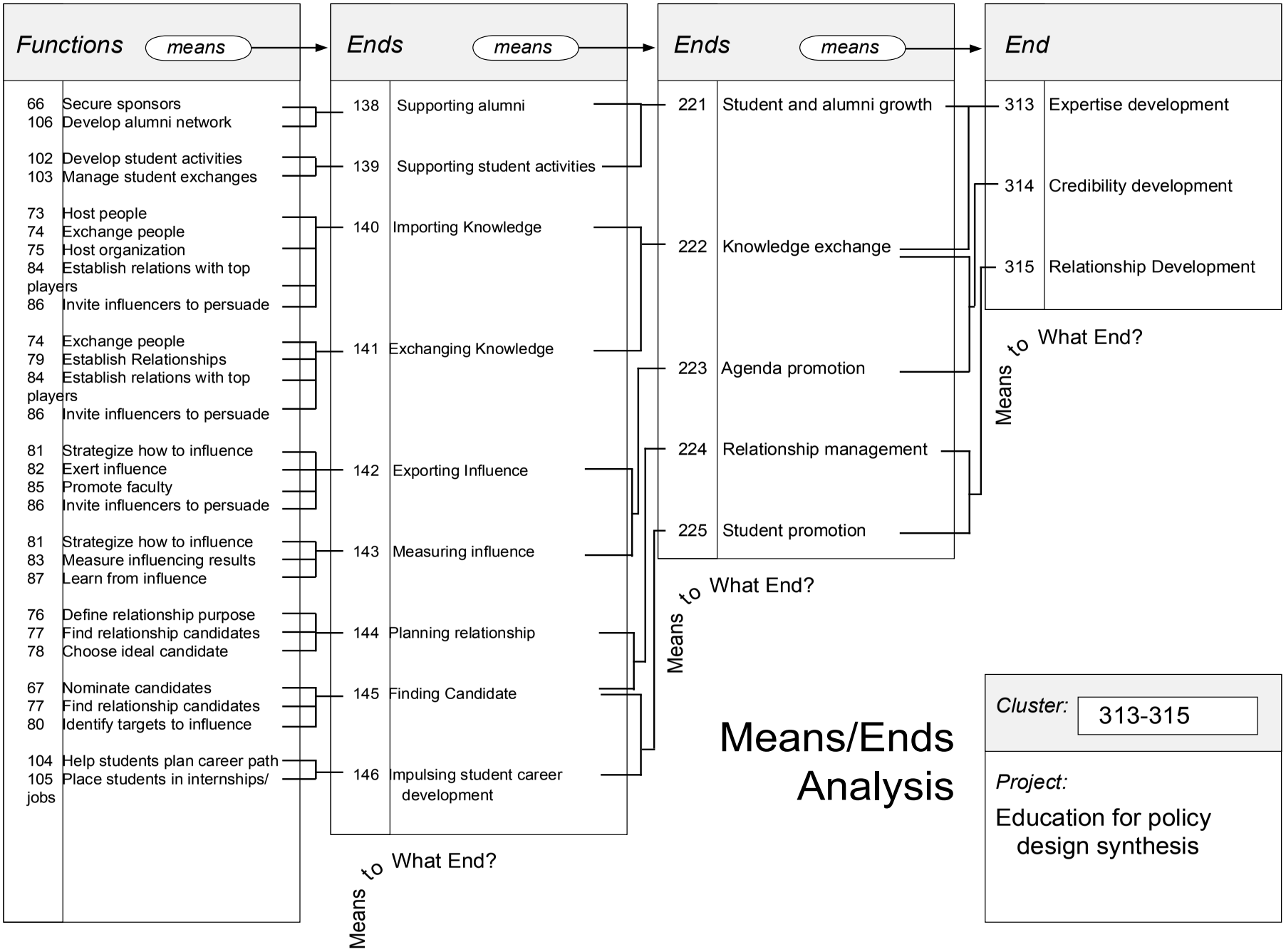
Associated Function/s

Archive Information

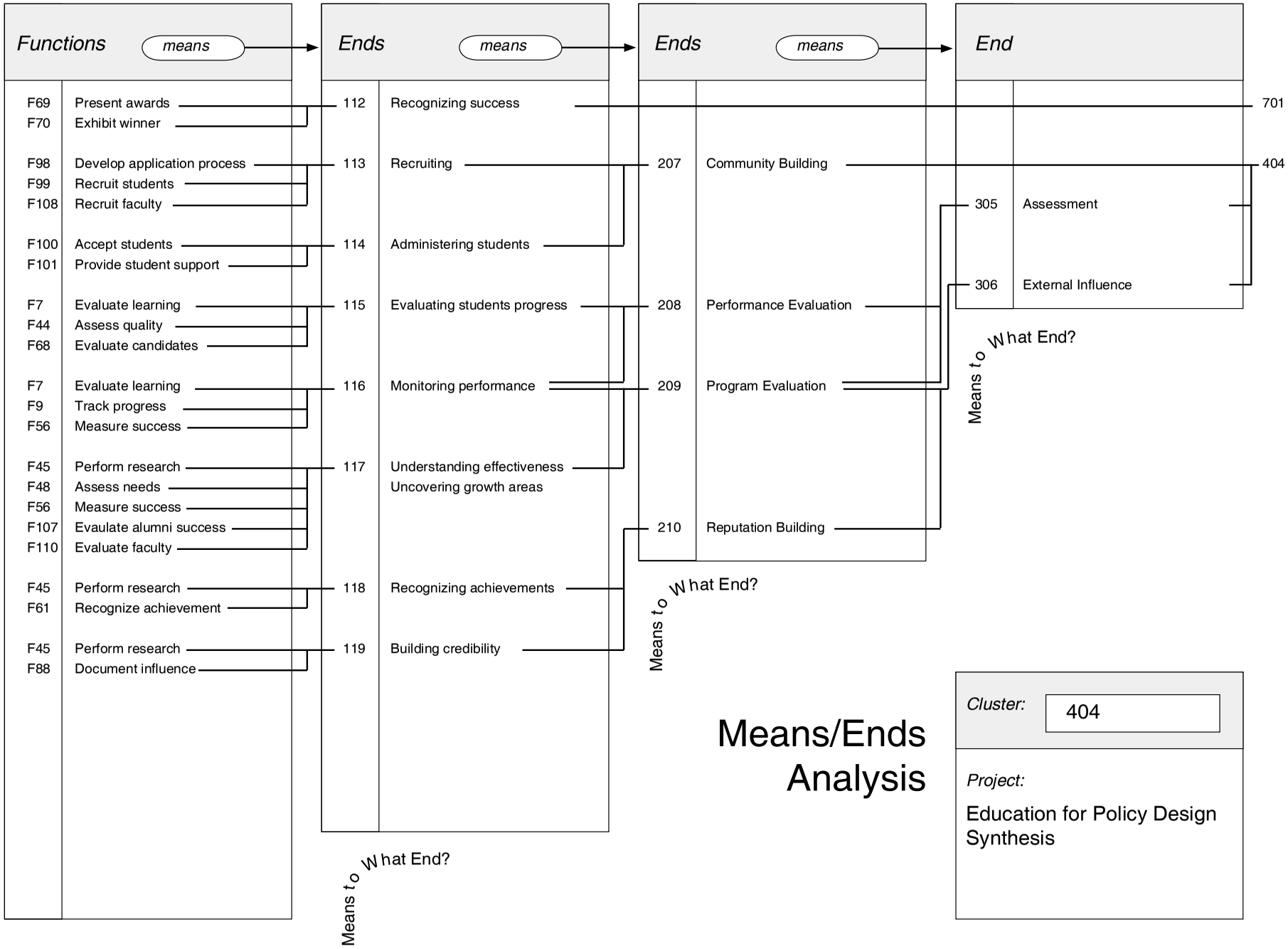
Source Design factor/s

No way to manage large amounts of data
Quality is difficult to assess

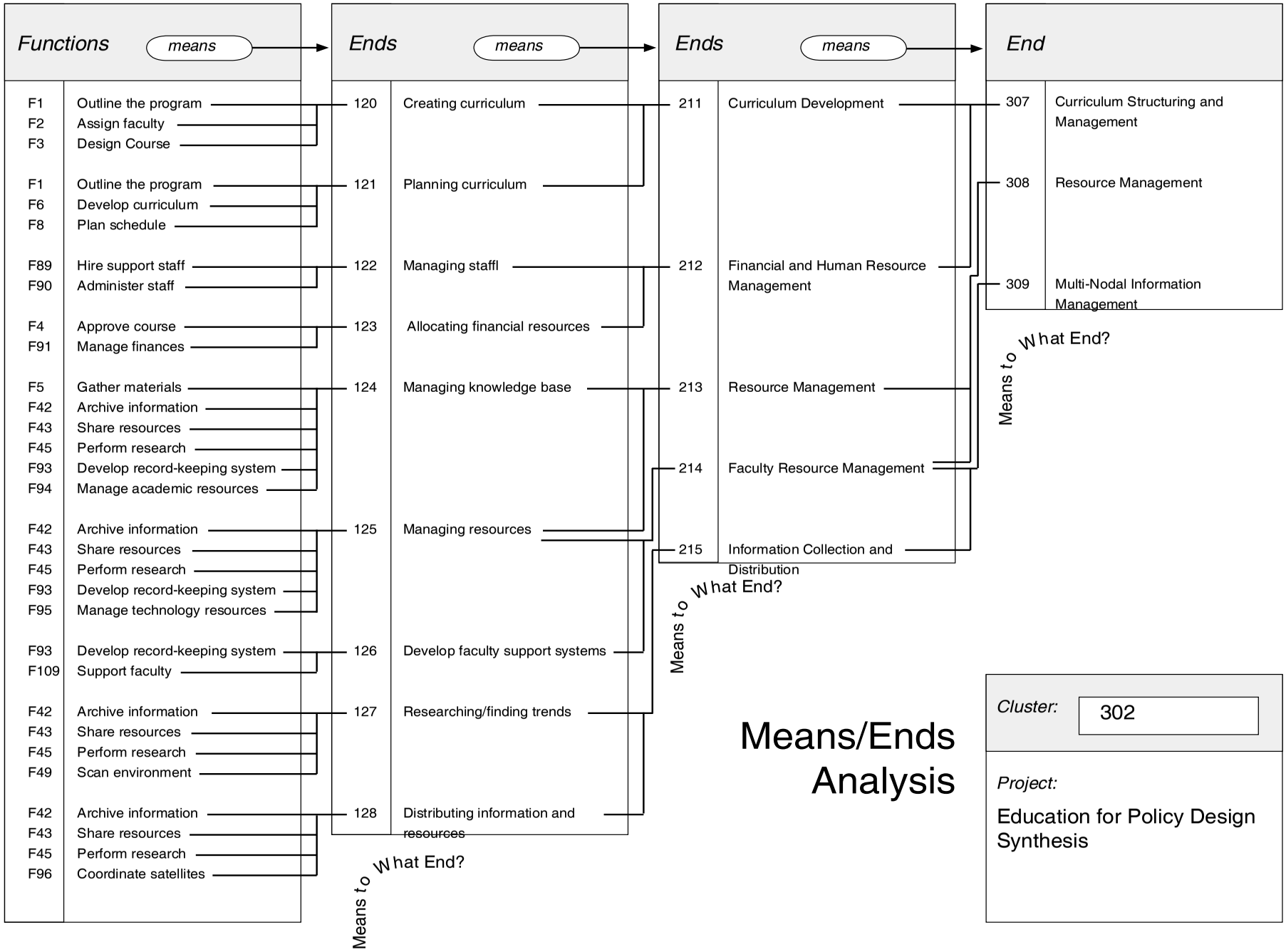
Version: **3** Date: October 11, 2005 Date of first version: October 2 , 2005



Means / Ends Analysis



Means / Ends Analysis

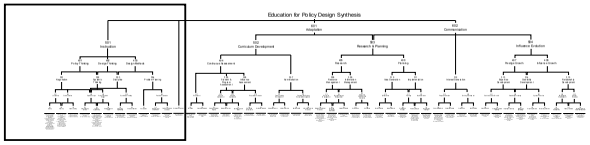


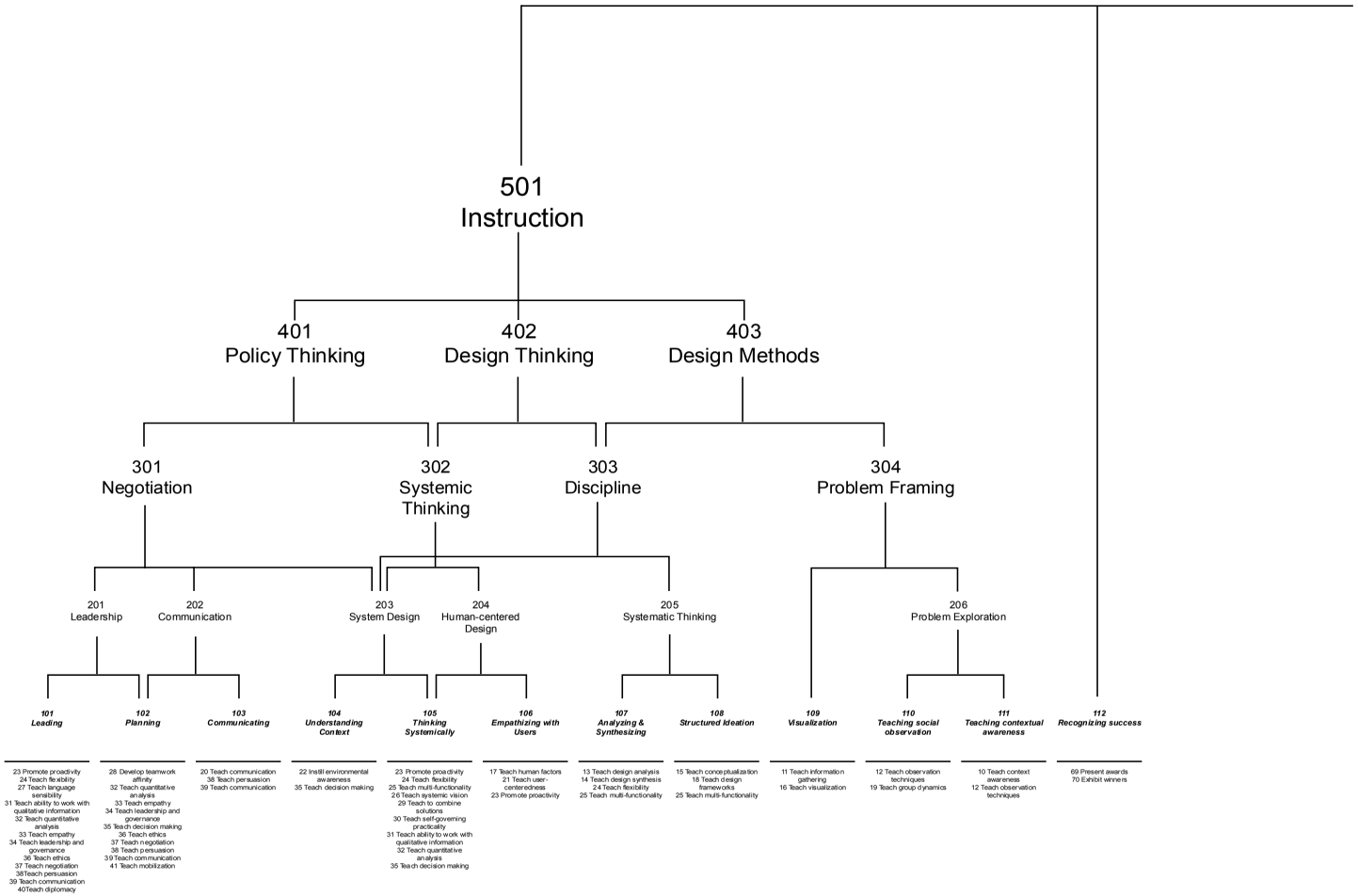
Means / Ends Analysis

Information Structure

Education for Policy Design Synthesis

December, 2005

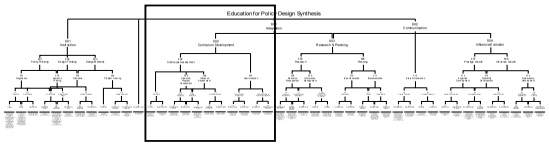


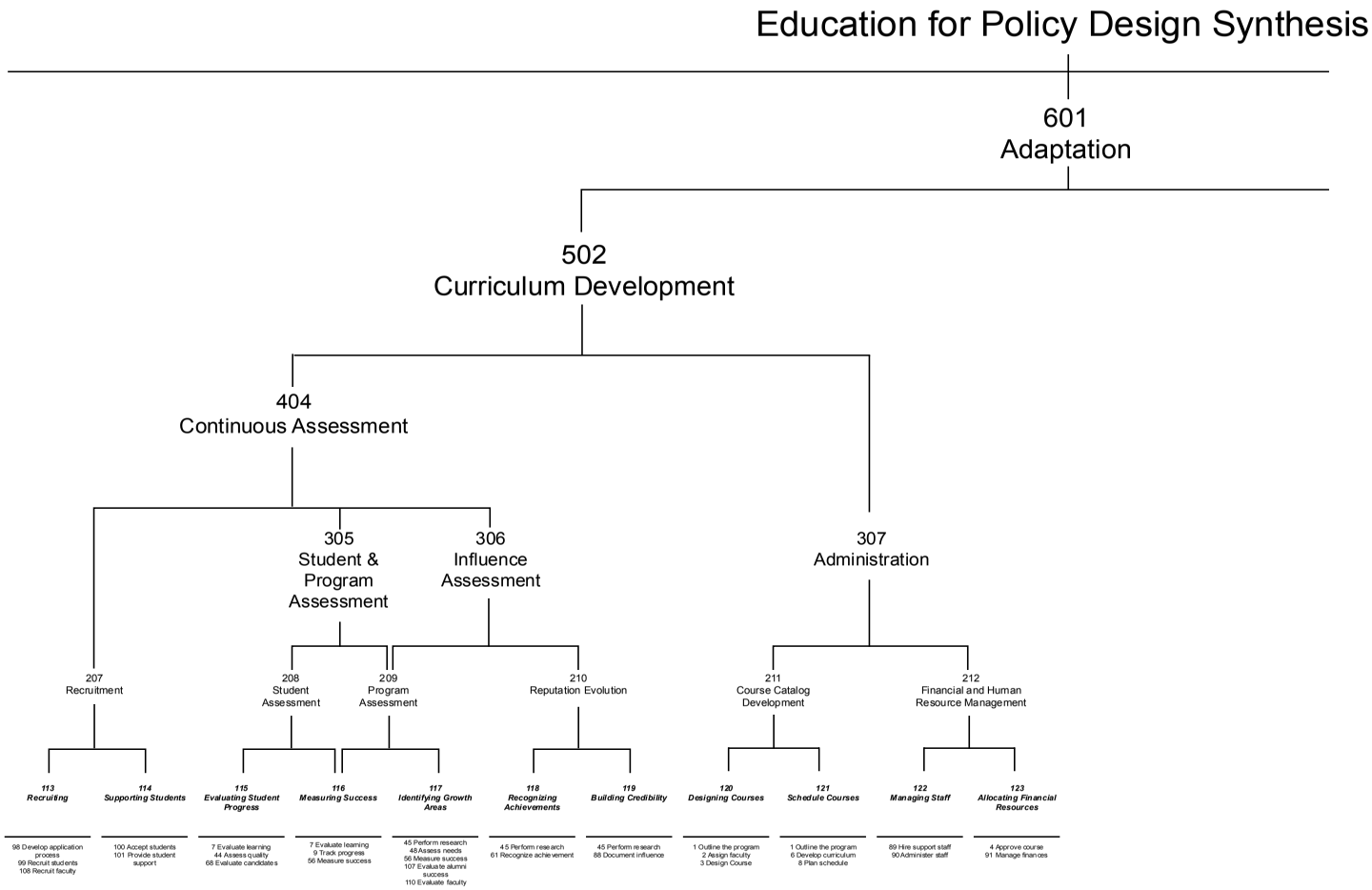


Information Structure

Education for Policy Design Synthesis

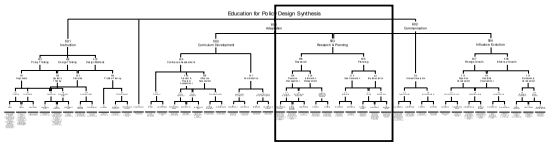
December, 2005

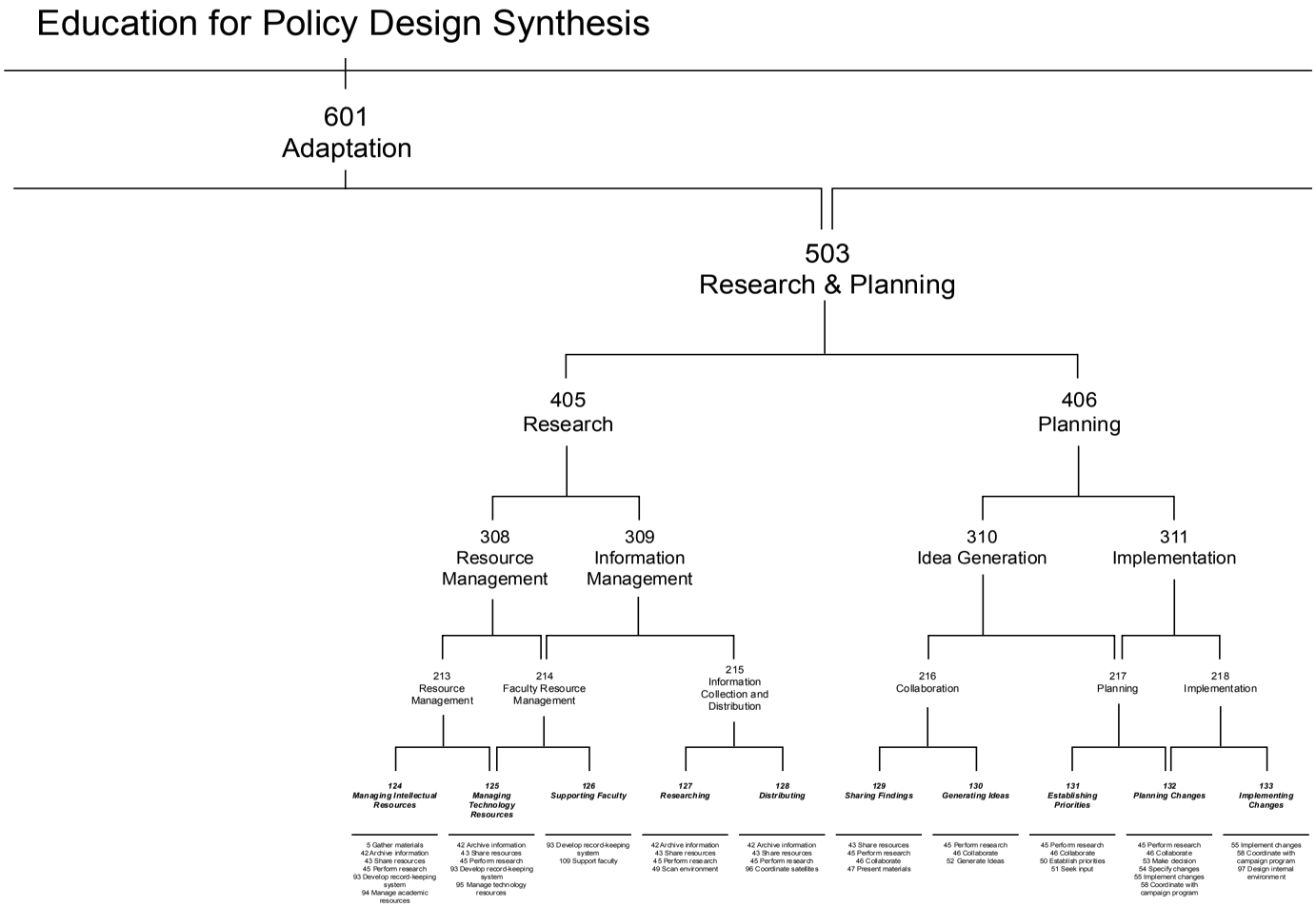




Information Structure

Education for Policy Design Synthesis
December, 2005

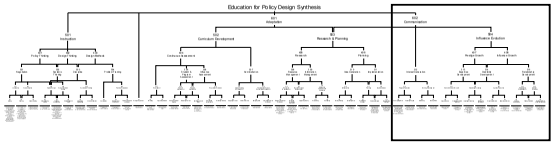


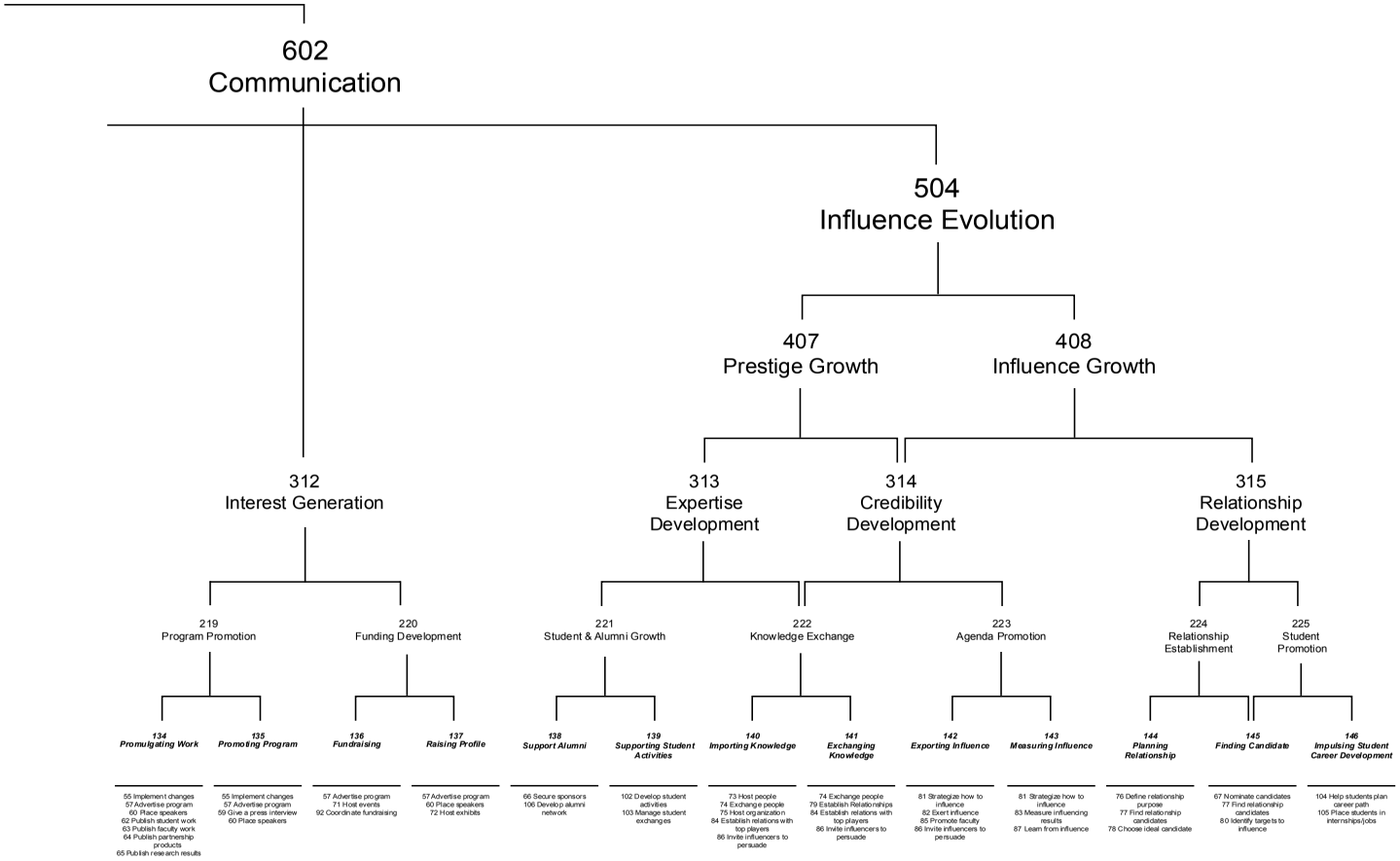


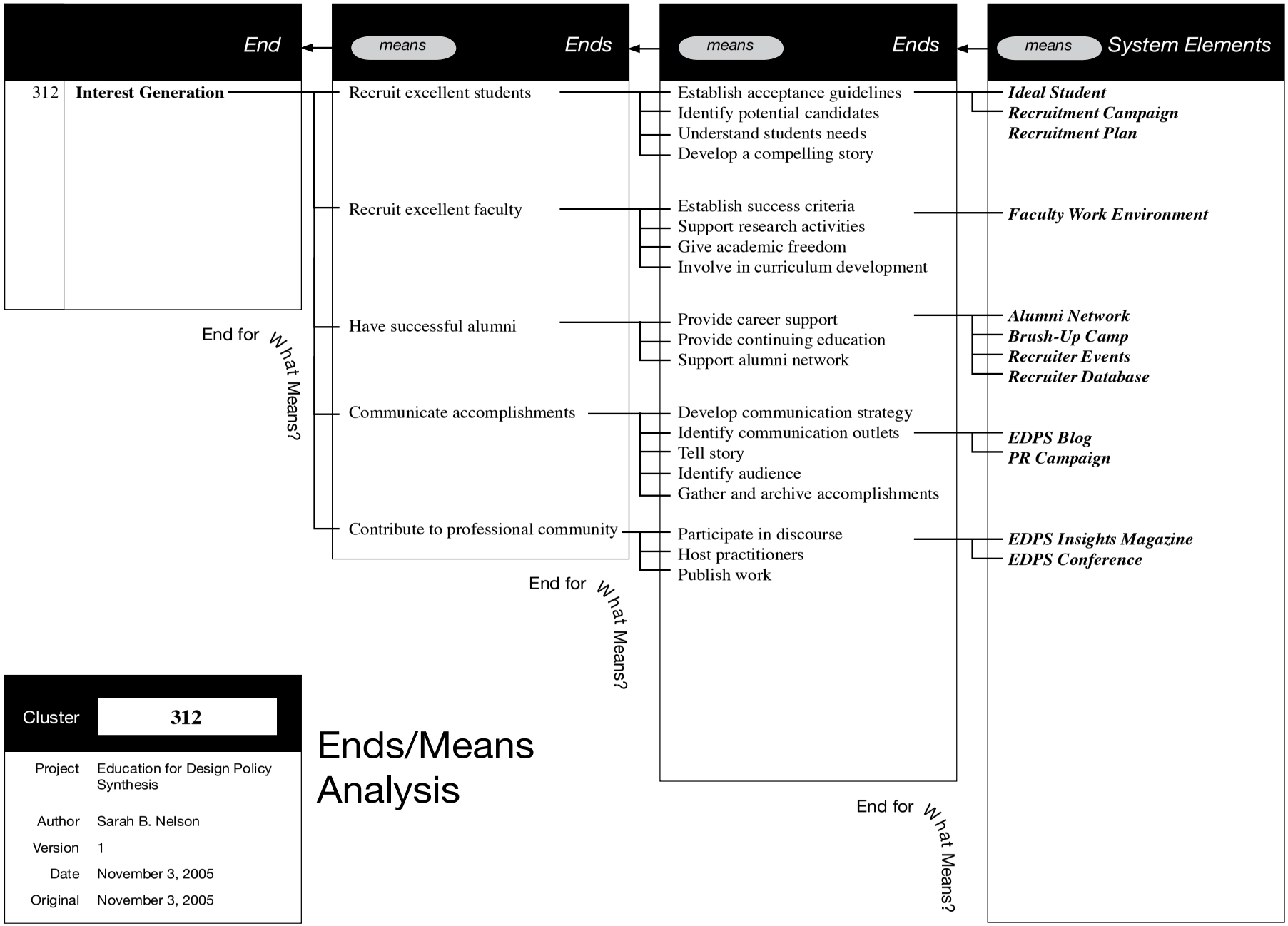
Information Structure

Education for Policy Design Synthesis

December, 2005

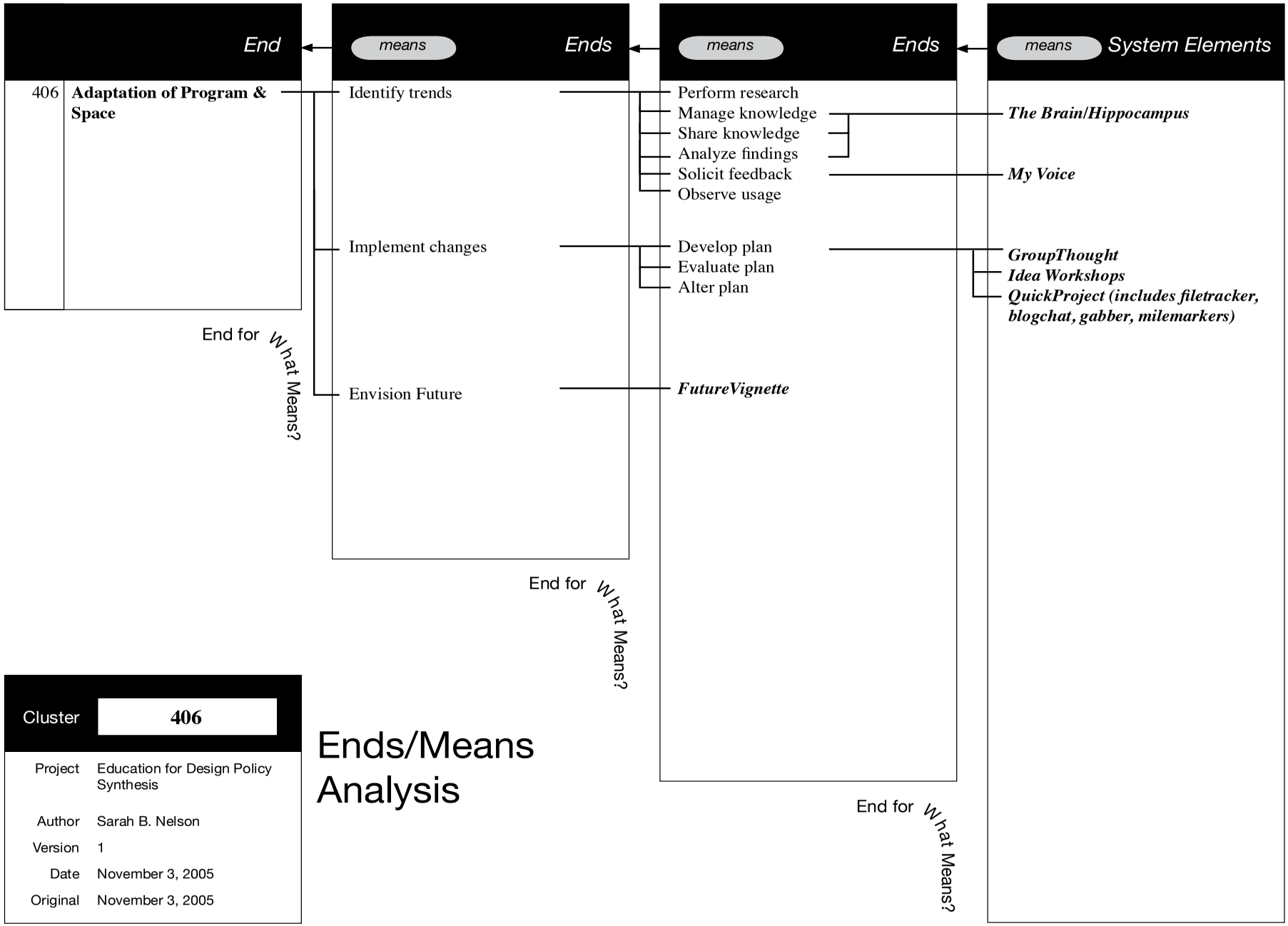






Cluster	312
Project	Education for Design Policy Synthesis
Author	Sarah B. Nelson
Version	1
Date	November 3, 2005
Original	November 3, 2005

Ends/Means Analysis



Cluster	406
Project	Education for Design Policy Synthesis
Author	Sarah B. Nelson
Version	1
Date	November 3, 2005
Original	November 3, 2005

Ends/Means Analysis

Project: Education for Policy Design Synthesis | Cluster: 204 | Page: 1

Functions	System Elements	Design Qualities							Polyzign		
	Features	1	2	3	4	5	6	7	1	2	3
	17. Teach human factors	■		⬛		■	■				■
	21. Teach user-centeredness	■		⬛		■		■			⬛
	23. Promote proactivity	⬛	■	■		■		■	⬛		■
	24. Teach flexibility	■	■	■		⬛	■	■	■		
	25. Teach multifunctionality		⬛	■		⬛	■	■	■	■	
	26. Teach systemic vision	■	■	■	■	■	⬛	■			
	29. Teach to combine solutions	⬛	■	■					■	■	■
	30. Teach self-governing practicality			■		■		■			
	31. Teach to work with qualitative information	⬛	⬛	■	■	■			■	■	■
	32. Teach quantitative analysis	■	■		■		■		■	■	■
	35. Teach decision making				■			■	■	⬛	⬛

⬛ Strongly supports fulfillment of the Function ■ Supports fulfillment of the Function

Feature / Function Matrix

Project: Education for Policy Design Synthesis | Cluster: 406 | Page: 1

Functions		System Elements: TrendSpotting					Strategy Consensus					Implementation Protocol			
		Features: 1	2	3	4	5	1	2	3	4	5	1	2	3	4
43.	Share resources			■	▪	■	▪	▪	▪		▪	■		▪	
45.	Perform research	▪	▪	▪	■							▪			
46.	Collaborate	▪		■	■		■	▪	■		▪	▪		■	
47.	Present materials			▪	▪	■			▪		■		■		
50.	Establish priorities				▪	■		▪	■		■		■	▪	
51.	Seek input		■	■			▪	■	▪						
52.	Generate Ideas		▪	■				▪		■		■	▪		
53.	Make decision			▪		▪		■	■	■	▪		■		
54.	Specify changes			▪		■			▪	▪	■	▪	■	▪	
55.	Implement changes					■					▪		▪	■	■
58.	Coordinate with campaign.												■	▪	
97.	Design internal environment										▪		■		

■ Strongly supports fulfillment of the Function ▪ Supports fulfillment of the Function

Feature / Function Matrix

Project: Education for Policy Design Synthesis

System Element Pairings: 1 - 4 (row elements) with 5 - 8 (column elements)

Page: 1

System Element Relationships

Score
3. Critical relationship
2. Strong relationship
1. Slight relationship
0. No relationship

System Elements	My Voice (1)	Governance (2)	Curriculum Development Team (3)	Interplay (4)
8 Cortex Classroom Intranet	score 0			
7 Cerebellum Project Management Tool	score 0	score 3 Members of the Governance team can use Cerebellum to manage initiatives or projects.		
6 Thalamus Communication Tool	score 3 My Voice BBS discussions are accessed through Thalamus. Calls for participation in My Voice Forums can be placed on Thalamus.	score 1 Governance team members can use Thalamus to post notices or make announcements.	score 1 Members of the Curriculum Development Team can post notices to Thalamus or make announcements.	
5 The Brain	score 2 My Voice forums or calls for participation can occur on The Brain or The Brain Kiosk.	score 1 Governance team members can use The Brain Kiosk to post notices or make announcements.	score 1 Members of the Curriculum Development Team can post notices to The Brain or Brain Kiosk.	score 2 The Brain Kiosk is encourages information sharing in both classroom and public Interplay areas.

Some questions to ask:

1. How should System Element X work with System Element Y?

2. What new feature/s are possible if System Element X works with System Element Y?

3. What new property/ies would make System Element X work with System Element Y?

Project: Education for Policy Design Synthesis

System Element Pairings: 5 - 8 (row elements) with 9 - 12 (column elements)

Page: 2

System Element Relationships

Score
3. Critical relationship
2. Strong relationship
1. Slight relationship
0. No relationship

System Elements	The Brain	Thalamus Communication Tool	Cerebellum Project Management Tool	Cortex Classroom Intranet
12 Design Qualities	score 2 Course materials and communications can be handled on The Brain's Cortex Classroom Intranet.			
11 DesComm	score 2 Course materials and communications can be handled on The Brain's Cortex Classroom Intranet.	score 0		
10 Instill-ation	score 2 Course materials and communications can be handled on The Brain's Cortex Classroom Intranet.	score 1 Calls for research participation can be posted to the Thalamus.	score 3 Instill-ation students can use Cerebellum to manage their project and share files and milestones with Instill-ation clients.	
9 Hippocampus Knowledge Exchange	score 3 Access to the Hippocampus is handled through The Brain's core interface.	score 1 Both the Thalamus and Hippocampus are accessible through The Brain's core interface. Recently added items to Hippocampus could be highlighted on Thalamus' "Whats's New?" section.	score 0	score 3 Class products can be added to Hippocampus at the end of each term.
System Elements	5	6	7	8

Some questions to ask:

1. How should System Element X work with System Element Y?

2. What new feature/s are possible if System Element X works with System Element Y?

3. What new property/ies would make System Element X work with System Element Y?

System Element	E M S	Student Immersions	1

Originator
Christine Kim

Contributors

SuperSet Element(s)

Related Elements
Foundation
Design Methods
Policy
Polyzign
Policy Domain Knowledge
DesComm
PolyComm

Sources
Institute of Design Foundation Program
Field trips
Team building excursions
Short courses
School orientations
StrengthFinder (www.strengthfinder.com)

SubSet Element(s)

Description

A "foundation program" held off-site where students can be engaged and immersed in workshops and exercises to learn valuable teamwork skills and other soft skills that will prepare them for the main program. Short "immersion" sessions of classes or projects are offered periodically throughout the semester to extend the experience, designed to bring everyone to the same level on various subjects.

Properties

- Off-site foundation program
- Mini-classes (weekend or week-long)
- Field trips
- Experiential learning opportunities

Features

- Introduces students to different subject areas
- Provides students with opportunities to engage in experiential learning
- Builds teamwork and other soft skills

Version: 3 Date: 4 December 2005 Date of Original: 18 November 2005

System Element	EMS	Student Immersions	1

Fulfilled Functions

F20. Teach Group Dynamics
F21. Teach Communication
F25. Teach flexibility
F28. Encourage curiosity

Design Factors

Students may be resistant to teamwork
Inability to see how other disciplines can improve their practice
Unable to collaborate with a team
Difficult to change thinking process
Students have different levels of knowledge/experience
Students have a tendency to be ethnocentric
Non-policy students have no understanding of the tools required to lead
Difficult to teach intuitive skills, which is often an experiential-based skillset

Discussion

Student Immersions is a series of short courses in which students can learn about different subject areas. The first **Student Immersion** begins prior to the start of classes where students go on a trip off-site to learn valuable skills in teamwork and other soft skills that will prepare them for the main program. Such an experience can help students get to know their peers; as well as understand the types of skills that will be expected of them during the program. With different backgrounds in education, work experience, language, and culture, students will need to learn how to effectively lead, communicate, and work with different people.

The offsite "foundation program" is a crash course for new students to help them develop skills needed for situations they may encounter during the school term. The workshops can focus on different subjects, presentation skills, group dynamics, listening skills, effective team meetings, roles and responsibilities. Teamwork is an integral component of the design policy education program, so developing skills for effective teamwork is important to positively affect group performance.

During the first **Student Immersion**, students may engage in role playing to expose them to different roles played within a group setting, such as the positions of leader, participant, facilitator, and expert. These role-playing scenarios illustrate how a team dynamic might work and provide guidelines on how to improve efficiency and effectiveness during meetings. They will also learn how to use other soft skills required for success during the program or in a future working environment.

After the "foundation program," students begin the school term equipped with new tools and prepared for the work ahead. Students should have learned to adapt to changing situations and be flexible when working in a team. Team morale should stay positive as team members treat each other with mutual respect. During the school year, mini-classes may be offered during weekends or during the week in which additional skills may be taught. For those who want a refresher course of the "foundation program," an advanced immersion program can also be offered during the year.

These skills are very important for the program as well as work in a future workplace. Experiential learning during Student Immersion will help policy design students "learn by doing" by engaging in different experiences.

Scenario Jack had been accepted to the policy design program that was starting in August. In the acceptance and introduction package he received in the mail, information about a one-month **Student Immersion** program that was being offered to new students. It was being held off-site at a hotel in a different city. **Student Immersion** was described as a "foundation" program that helps students prepare for student life and work in the policy design program by learning valuable skills required in the program.

After arriving at the hotel, Jack met about 20 other new students that came from different cities with different experiences. After brief introductions and administrative items, they broke out into small groups and headed into a team building workshop. During this workshop, Jack and a few of his fellow students were grouped into a team of five. They were presented with a short project and each person received a paper with the role they were supposed to play. Jack was randomly picked to be the group leader during this first round. The group members went through the short project and played their assigned roles that had different personalities attached to them. Some were chosen to be disruptive, others were very aggressive, or detached, or had some type of communication barrier. Jack had to navigate these obstacles to finish the project.

The activities of the group were videotaped. At the end of the workshop, the group members met with an advisor that watched parts of the videotape to evaluate the team dynamics. It was very eye-opening for Jack, as this was the first time he was put in a position to lead, and he discovered that he needed to do a better job delegating tasks to his team members while trying to motivate them and get better buy-in. He learned how to quickly evaluate his team members and to use each of their strengths better.

Discussion con't

The other workshops during the week were very informative. Jack attended one seminar that focused on relating to different cultures and how they may be perceived incorrectly. Another seminar dealt with how design thinking is different and how to think in a nonlinear fashion. During this program, Jack spent a lot of time with his future classmates and made some friendships.

During the semester, the skills learned during the **Student Immersion** week really helped Jack. These skills are not usually taught in a classroom setting, so he was glad to have had the opportunity to learn them through an experiential setting. Without these skills students would go through a lot of frustration before learning them during the school year. His teams worked well together, and he was now aware of how to address issues that came up. Jack was looking forward to attending mini-class workshops to add additional skills and tools to his skill set.

System Element	EMS	MethaDesign	2

Originator
Steven Babitch

Contributors

SuperSet Element(s)

Related Elements
Design Methods
Design Qualities
Policy Domain Knowledge

Sources
Keeley, Larry. *Framework Pack*, **Design Planning**. Fall 2005.

SubSet Element(s)
MethaDesign Database
Future Vignette

Description

MethaDesign is an evolving set of techniques and methods that students and graduates of EPDS, in a strategic planning or policy planning role, can use to think about and approach a problem. A summary of the methods can be found in the MethaDesign Database.

Properties

- A collection of frameworks and methods
- Problem analysis tools
- Methods to turn analysis insights into synthesized solutions
- Observation exercises
- Decomposition/problem breakdown exercises
- Critical questioning perspective
- Framing exercises
- A database

Features

- Provides students structured ways of approaching problems
- Trains students to be more disciplined when approaching a design problem
- Provides students with guidelines and frameworks to follow in order to cover as many aspects as possible in problems

Version: 4 Date: 6 December 2005 Date of Original: 18 November 2005

System Element	EMS	MethaDesign	2

Fulfilled Functions

F10. Teach Information Gathering
F11. Teach Observation Techniques
F12. Teach Design Analysis
F13. Teach Design Synthesis
F14. Teach Conceptualization
F15. Teach Visualization
F16. Teach Human Factors
F17. Teach Prototyping Methods
F18. Teach Context Awareness
F19. Teach Design Frameworks
F20. Teach Group Dynamics
F21. Teach Communication

Design Factors

Difficult to teach sensitivity
Evaluation and feedback may be subjective
Difficult to teach how to filter data for relevance
Difficult to change behaviors
Difficult to teach students to remove bias
Difficult to teach non-linear thought process
Difficult to instill human-centered values

Discussion

MethaDesign are generalist methods and exercises that can be applied to almost any problem solving situation. The key aspect of these methods is that they draw from the perspectives of **Design Qualities**. When used in an appropriate manner (there can be more than one) the method can produce new and innovative ways of seeing and analyzing a problem and synthesizing a solution. This is the nature of design thinking is to see a problem in ways that may not be derived through other analytical methods, such as quantitative analysis, and to create solutions in an innovative, but systematic way.

The systematic approach to design is not so commonly used mainly because many experienced designers rely on their own experience and trust their internal creative intuition to achieve coverage and provide a solution that aims to solve a specific problem. While intuition is a valuable asset especially if it is grounded in experience and in recognizing patterns along projects, it is something that can't be transmitted immediately.

MethaDesign provides working frameworks for students to articulate their design practice in a disciplined manner. The value of the exercising of this these structured practices areis that they work as a guide for the creative process, ensuring that all aspects are considered, and helping in turning turn good policy ideas into effective policy ideas.

From a design methodology perspective, the curriculum emphasizes learning analysis and synthesis tools, user-observational frameworks, and methods for a systematic approach to problems, which are specially used for dealing with large and complex systems.

Analysis tools and frameworks allow students and graduates to break down a problem into manageable pieces. Qualitative user-observational tools and frameworks allow students to understand user behavior, which can then begin to form a basis for what the issues that might be considered in strategic planning efforts. Qualitative observational frameworks can be combined with more traditional quantitative analytical methods to provide a deeper understanding of the issues.

For example, consider the question many cities have on their minds today, "How can cities become more appealing to "families" with children?" There is plenty of quantitative data to sift through, but now let's add to that qualitative data that approaches the question differently.

A sub topic likely will center itself around public spaces for families visit. The **AEIOU Framework** might be of use in understanding issues relating to spaces:

A, for Activities, asks what are the modes people work in and the specific activities and processes people go through?

E, for Environments, asks what is the character and function of the space or environment overall, and of individuals' spaces or shared spaces?

I, for Interactions, asks what is the nature of routine and special interactions between people, families, siblings, and parents and their children? What about between people and objects in the environment, across distance?

O, for Objects, asks what are the objects and devices people have in their environments and how do they relate to their activities?

And finally **U**, for Users, asks who's there? What are their roles and relationships? What are their values and prejudices?

Quantitative methods will not yield this kind of data on its own, but combining the quantitative and qualitative data will yield powerful insights which can lead to significant innovations: in the above example, an effective plan for cities to attract families with children.
This example demonstrates the systematic and repeatable approach to providing means of producing effective policy and effective strategic plans for change. Graduates of EPDS will have the tools necessary to produce these insights and results.

Version: 4 Date: 6 December 2005 Date of Original: 18 November 2005

System Element	EMS	Future Vignette	3

Originator
Christine Kim

Contributors

SuperSet Element(s)
MethaDesign

Related Elements
DesComm
Strategem

Sources
Nattrass, Brian & Mary Altomare **Dancing with the Tiger.** *BC, Canada: New Society Publishers, 2002.*

SubSet Element(s)

Description

A brainstorming technique that frees participants from the constraints of the present by imagining their idea or situation many years into the future. Once the ideal future scenario has been envisioned, users can look back to the present to determine the appropriate course of action required to achieve the vision.

Properties

- A framework or model for thinking about future scenarios
- Guidelines to using technique effectively
- Evaluation criteria to assess scenarios
- Scenario creation tool

Features

- Identifies objectives and constraints
- Creates ideal future scenarios
- Helps anticipate unintended consequences
- Assesses scenarios against current reality
- Helps identify effective investments, strategies, actions, and tools that meet objectives

Version: 3 Date: 4 December 2005 Date of Original: 18 November 2005

System Element	EMS	Future Vignette	3

Fulfilled Functions

F12. Teach Design Analysis
F13. Teach Design Synthesis
F14. Teach Conceptualization
F18. Teach Context Awareness
F22. Instill human-centeredness
F23. Instill environmental awareness
F27. Teach systemic vision
F28. Encourage curiosity
F32. Teach self-governing practicality
F40. Teach causal theory

Design Factors

Difficult to change thinking process
Difficult to teach divergent thinking
Difficult to instill human-centered values
Hazardous environmental global situation underestimated by students
Unable to envision adaptive solutions
Inability to integrate several functions into one solution
Inability to see complex things as systems
Lack of inventiveness to integrate solutions
Unable to self govern practically

Discussion

Future Vignette gives students and faculty the power of imagination by removing current existing solutions from the picture so they can focus on creating new innovative solutions without being bogged down with the present situation. **Future Vignette** helps users start from a blank sheet of paper to come up with a new vision of how the world should be at a future date. Once a plausible future scenario has been envisioned, students then work backwards to think of the steps they need to take today to make the vision a reality. This method helps frame a discussion to identify goals, assumptions, problems, resources, etc. that help the team get on the same page. This process allows new assumptions to be created instead of using old ones, preventing students from using the same mode of thinking that created the initial problem to begin with.

To create truly innovative solutions to problems, students need to employ a different mode of thinking than they typically use to tackle problems. **Future Vignette** helps students change the way they perceive the world by thinking from a systems perspective. People have been taught to perceive the world in terms of objects or components that can individually be studied and understood. This approach breaks down complex systems into individual parts, and then analyzes each part to understand the system. When using this approach, the interrelationships between these parts have been lost. Systems thinking allows students to understand the interactions and relationships between the parts of the system as well as analyze the behaviors of the individual parts themselves.

Process. **Future Vignette** begins with defining the objectives and constraints that need to be worked with. Once there is a solid understanding of what constitutes a successful outcome and an awareness of why the current system is problematic, future scenarios can be developed. Then, looking back to the present, these future scenarios can be assessed against current reality. Repeating this process will help uncover an innovative solution that has considered all unintended consequences. Once a direction has been chosen, the most effective investments, strategies, actions, and tools can be identified that meet the defined objectives using **Strategem**.

Students that frequently employ **Future Vignette** in their projects will begin to understand and develop how a systems thinking approach helps anticipate the unintended consequences of their solutions. Instead of taking a highly analytical approach to break down a problem into its many components, students will begin to take a more integrative approach that leads to synthesis rather than dissection.

To share the future vision created using **Future Vignette**, future scenarios will be created visually using **DesComm** to paint a picture of what the future might look like. This scenario can be shared with others to tell the story through a visual diagram.

Scenario. Alice and Matt were working together on a project for a client. The client needed to present a solution for the increasing traffic gridlock that was plaguing the city's business district. While brainstorming for ideas, Alice began to think about a different way to approach this issue. Instead of brainstorming solutions from the available options at their disposal, maybe they should reach further and think bigger. Exactly what was the goal of this project? Was it to redirect traffic flows to alleviate traffic jams, to change the timing of the traffic lights, use traffic patrols during busy periods, or build wider streets? These were all solutions that could be incorporated with the existing materials, but would this really solve the problem?

Alice brought up the idea of **Future Vignette**, which she had learned in policy design school, and she helped bring Matt up to speed with the topic. Alice and Matt began imaging what the ideal future scenario would be, and they imagined what it would like to have an entire city that did not generate pollution from transportation and had no traffic problems. It was a pretty lofty goal, but this vision motivated Alice and Matt to think big. The next step in the process was to look back to the present from this future scenario to determine what could be done today to help to achieve this future goal. At first, Matt suggested solutions such as more public transportation and bicycle lanes, but these were ideas

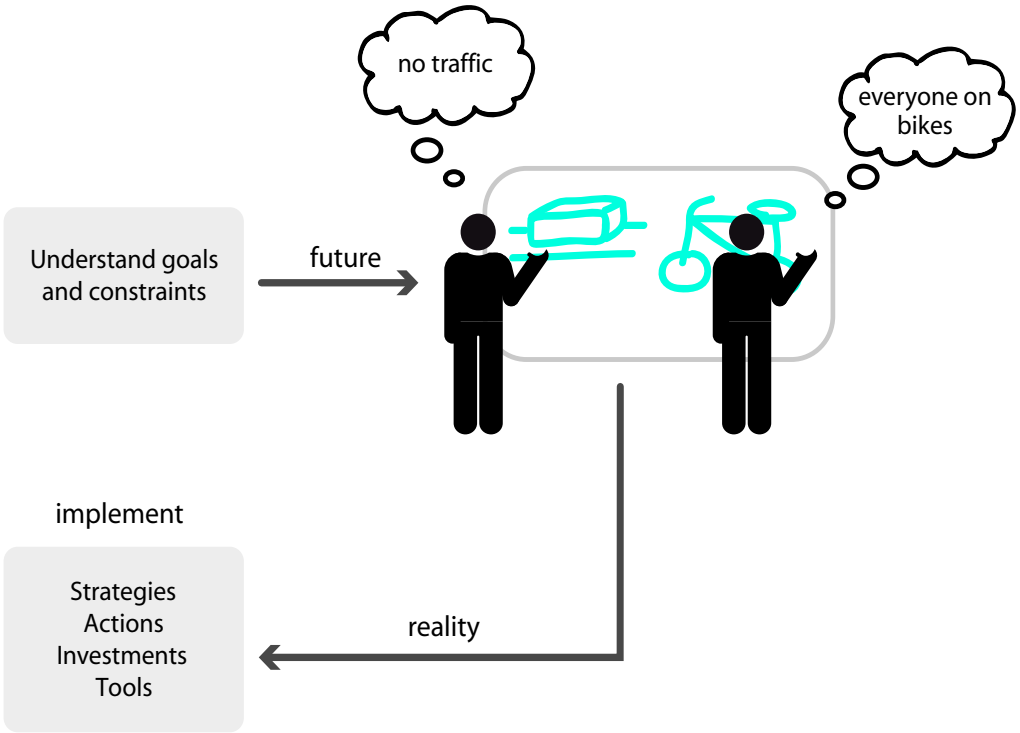
Discussion con't

based on the current available options and assumptions. They would be trying to solve the problem with the same thinking that created them. A new set of assumptions would have to be used.

In this future scenario for the city, Alice and Matt knew that the public transportation services would have to be very efficient, clean, and appealing to all people. Instead of throwing more volume at the problem, they decided that an extensive research project needed to be done to analyze the patterns of current commuters and determine which parts of existing transportation system contributed to pollution. After the data was analyzed, they could begin coming up with new ways to structure the future public transportation solution. They also brainstormed about ways pedestrians could navigate the city without disrupting traffic. Pedways, tunnels, and skywalks could be created around the city.

To solve the pollutions problem, Alice and Matt believed that hybrid engines were a solution tied too closely with the current energy situation. An electric power grid to run the public transportation would decrease the reliance on gasoline, although they would still need some gas for emergency back-up purposes, and would eliminate much of the pollution entering the air. Matt suggested the use of batteries and high-transfer rate rechargers at stations. They also looked at emerging technologies and power sources that would be available in the future.

After two hours of **Future Vignette** brainstorming, Alice and Matt had come up with a multitude of solutions and scenarios to help achieve their goal of a clean, traffic-less city. Among the solutions was a way to solve the traffic problems in the business district in particular. **Future Vignette** allowed them to identify and address potential problems and unintended consequences that could surface from their solution.



System Element	E M S	Collaborator	4

Originator
Christine Kim

Contributors

SuperSet Element(s)

Related Elements
The Brain
Interplay

Sources
Lencioni, Patrick. **Overcoming the Five Dysfunctions of a Team**. *San Francisco: Jossey-Bass, 2005.*

SubSet Element(s)
Mixer

Description
A team building tool that facilitates effective team communication and interaction by assigning roles, establishing guidelines, and creating an environment for mutual respect between team members. Collaborator helps teams work together to create better ideas.

Properties
- Interdisciplinary, structured teams for class projects
- Rules for effective team engagement
- A tool for building teams

Features
- Helps student groups understand how to operate effectively as a team
- Ensures individual and project goals are openly shared
- Helps students gain experience not just in areas of current strength but in new areas
- Offers supportive environment to try new things
- Develops interpersonal skills (negotiation, diplomacy, mobilization)
- Teaches techniques for managing group dynamics

Version: 3 Date: 4 December 2005 Date of Original: 18 November 2005

System Element	EMS	Collaborator	4

Fulfilled Functions

F19. Teach Group Dynamics
F30. Teach teamwork affinity
F38. Teach leadership and governance
F44. Teach communication
F45. Learn diplomacy

Design Factors

Difficult to change behaviors
Difficult to teach students to remove bias
Students may be resistant to teamwork
Jargon may be a barrier to communication
Unable to be enthusiastic and positive when designing
Inability to see how other disciplines can improve their practice
Unable to collaborate within a team
Students have different levels of knowledge/experience
Students have a tendency to be ethnocentric
Non-policy students have no understanding of the tools required to lead
Students are not naturally "people persons"
People avoid face to face communication

Discussion

Teamwork is an integral part of the education process at the policy design program. **Collaborator** is a team building tool that facilitates effective team communication and interaction by assigning roles, establishing guidelines, and creating an environment for mutual respect between team members. Collaborator helps team members work together to create better ideas.

According to *Overcoming the Five Dysfunctions of a Team*, there are five critical characteristics to effective teamwork:
1. Building trust
2. Mastering conflict
3. Achieving commitment
4. Embracing accountability
5. Focusing on results.

Collaborator helps students develop these five functions of effective teamwork. Along with these goals, students learn how to communicate and interact effectively within team environments.

Collaborator provides guidelines, such as some basic principles for brainstorming sessions:
- Start with a well-honed statement of the problem
- Do not judge, challenge, evaluate, or criticize
- Focus on quantity, not quality
- Organize concepts on the board

Once all ideas have been generated, an evaluation process can begin by using a voting system by team members. Post-its can be used to place votes to identify the strongest concepts to move forward with. These can be combined or integrated into even stronger concepts.

Interplay contributes to **Collaborator** by designating spaces where teams can meet and work together in efficient and productive spaces. **Team Rooms** foster brainstorming sessions and an environment for active communication.

Mixer

Mixer is a method for project team assembly, constructing balanced project teams and helping those teams function efficiently and productively. Teams for class projects are carefully constructed to be balanced and interdisciplinary. Each team should have members strong in design, policy or both. Some aspects of the team design are stated explicitly. Everyone is given an opportunity to play the role of team leader, and given opportunities to take on roles outside their expert areas to learn new skills.

System Element	E M S	DesComm	5

Originator
Christine Kim

Contributors

Sources
Personal observation
ID courses

SuperSet Element(s)

SubSet Element(s)

Related Elements
PolyComm

Description

Design Communication requires skills such as visualization, persuasion, and effective storytelling. DesComm is a tool that helps create powerful scenarios and visualizations by helping the user think through the process. DesComm can also be taken offline with printed guidelines that can be used in lesson plans or team projects.

Properties

- Visualization module
- Persuasion module
- Storytelling module
- Scenario development
- Guidelines

Features

- Helps students use visualization methods to analyze a scenario
- Helps students with their abilities to craft a solution and to get buy-in
- Teaches students how to create a well-told story that brings together their ideas and solutions
- Allows for guidelines to be printed and taken outside of the computer to be used in lesson plans or project planning

Version: 3 Date: 4 December 2005 Date of Original: 18 November 2005

System Element	EMS	DesComm	5

Fulfilled Functions

F15. Teach Visualization
F21. Teach Communication
F29. Teach language sensitivity
F33. Teach to work with qualitative information

Design Factors

Difficult to change thinking process
Difficult to teach students to see subtleties
Unable to envision adaptive solutions
Lack of language fluency
Unable to consider quality
Students have different levels of knowledge/experience
People don't possess natural ability of persuasion
Difficult to build confidence and overcome shyness
Difficult to build a case targeted to unfamiliar audiences

Discussion

Design communication requires skills such as visualization, persuasion, and effective storytelling. **DesComm** is a design communication tool that helps create powerful scenarios and visualizations by helping the user think through the design process.

Students can access different modules in **DesComm** to work on their visualization, persuasion, or storytelling skills. Each module takes the student through a step-by-step process that can be use to determine fill in the scenario. A list of guidelines provide direction, as students think through the design process to bring an idea to life.

Visualization module
The visualization module helps students create visualizations to illustrate a scenario or communicate an idea.

Persuasion module
The persuasion module helps students craft logical arguments to help them develop a case to get buy-in from others.

Storytelling module
The storytelling module teaches students how to create a compelling story that communicates their ideas.

Creating powerful visualizations can help communicate and support policy decisions that are being made.

DesComm can be used without using the software tool by creating printed guidelines which students can use in the classroom, on project teams, or at work. These guidelines can act as checklists to help the user incorporate the elements of design communication in their work.

Version: 3 Date: 4 December 2005 Date of Original: 18 November 2005

System Element	EMS	Design Qualities	6

Originator

Steven Babitch

Contributors

Enric Gili Fort

SuperSet Element(s)

Related Elements

Design Methods
Polyzign
Policy Domain Knowledge
Curriculum Development Team

Sources

Chuck Owen, "Design Thinking, Some Special Characteristics."

Larry Keeley, Design Planning Coursepack, Design Planning, Institute of Design, Fall 2005

Bruce Nussbaum, "Get Creative!" August 1, 2005, BusinessWeek.

Team Deliberations

SubSet Element(s)

Human-Centeredness
Human Focus
Generalism
Systemic Vision
Open-Mindedness
Facility for Avoiding the Necessity of Choice

Description

Design Qualities are the characteristics of a designer that the Education program instills in its graduates. These are the design or innovation traits that help form a successful candidate for strategic planning in the context of the policy making arena.

Properties

- A set of qualities of characteristics
- Abstract in nature
- Traits that tend to be found in systematic design thinkers

Features

- Helps policy advisors and strategists create conditions for exploration and ideation of policy-related solutions
- Fosters an open collaboration between various advisors in the context of forming policy or plans relating to the public sector issues
- Focuses on human-centeredness
- Helps to visualize, imagine, tell stories
- Fosters a bias for adaptivity and multi-functionality
- Allows for systemic and systematic ways of approaching problems
- Builds an affinity for teamwork

Version: 4 Date: 6 December 2005 Date of Original: 18 November 2005

System Element	EMS	Design Qualities	6

Fulfilled Functions

F22. Teach human-centeredness
F23. Instill environmental awareness
F24. Promote proactivity and optimism
F25. Teach flexibility
F26. Teach multifunctionality
F27. Teach systemic vision
F28. Encourage curiosity
F29. Teach language sensitivity
F30. Teach teamwork affinity
F31. Teach solution combination
F32. Teach self-governing practicality
F33. Teach to work with qualitative information

Design Factors

Importance of user-centered design not understood
Inability to integrate several functions into one solution
Inability to see complex things as systems
Inability to see how other disciplines can improve their practice
Difficult to change thinking process
Students have different levels of knowledge and experience
Students have different comfort levels with ambiguity
Unable to define details of courses
Difficult to compile all courses
Unable to track progress
Difficulty in leveling the field in terms of student skill sets

Discussion

The use of these characteristics is easily applicable to a variety of situations, whether in the policy arena or other contexts, but designers should instinctively call upon these characteristics to solve problems.

Human–Centeredness, the characteristic of having consideration for the human perspective, is essential for this program. Graduates of the program should understand human behavior. They should be focused on how to find interesting insights into why people behave the way they do, what are the trends in lifestyle, how it applies to everyday life, what is changing in the world, how technology affects the way people live, and the way they interact with each other,

HumanFocus is a series of activities, exercises, and case study in which students engage in projects that would result in improvement to everyday life. It is important to focus on how the user might is affected by outcomes or decisions made. Questions raised might include: How will this policy decision affect a particular group of people? How will modifying this policy or initiative affect the public or a particular group of people? This would be followed by mapping out how and why this happens as well as determining solutions to help graduates. The project may or may not involve a topic directly relating to public policy. If not, then correlations can be drawn to see how understanding human centered awareness helps to create better policy.

Generalism
Designers must also possess the perspective of a generalist. There are many people who specialize in a variety of fields. But not many of them can step back to see the broader perspective because they have been trained to see the world through a very specialized lens.

Systemic Vision
Relating to generalism, the design quality of being able to have a systemic vision is about thinking broadly about problems. This means designers can treat problems as systemic problems which may yield systemic solutions such as processes, procedures, policies, or plans. We increasingly see this idea in a business context. Design thinking is gaining traction in the business world in that strategic planning is embracing innovation issues and expertise. In a similar manner, these principles can be applied in the policy context.

Open Mindedness and the Facility for Avoiding the necessity of Choice
EPDS should instill in its students the quality of open-mindedness and the facility for avoiding the necessity of choice. Avoiding immediate choice is a critical quality of designers. When analyzing a situation, it is far too easy to focus on one way of solving a problem at the expense of ignoring or not seeing other problems.

Designers bring a unique perspective in that they seek to create solutions that can be multi-functional. They avoid the necessity for choice to determine if we can "have our cake and eat it too." By avoiding the necessity for choice, students of EPDS remain open-minded to keep the bigger in perspective while at the same time understanding specific issues within the larger context. Then they can see if designers take a systemic perspective to ensure coverage of a problem.

Tackling complex issues in **Case Studies** and during **Policy Systems Workshops** will give students an understanding of why and how avoiding choice provides the potential for creating solutions that consider all aspects of an issue. **Policy Systems Workshops** are longer projects that use **Structured Planning** to facilitate understanding of complex problems. **Structured Planning** is an information organizing and gathering tool that ensures coverage of all relevant issues pertaining to a larger problem.

Switch Thinking is a method by which students proceed toward a particular solution for a problem. During the process, another problem that was not foreseen is introduced by the faculty member. Students must now consider this new problem and its effects in light of the larger problem and seek to find a solution that can help solve both

Discussion con't

simultaneously.

Mind Agilizers uses methods, creativity techniques, and exercises to open students' way of thinking.

They provide students with the perspective necessary to explore and evaluate different solutions. Mind agilizers can help students in all steps of the creative process.

The nature of design is to see if there is another way of looking at a problem. Students must learn to accept each solution as possible until it is evaluated, leaving all assumptions.

The use of different frames, mental models, and paradigms helps to see the situation from different perspectives. **Mind Agilizers** can be applied in a set of exercises to make students conscious of the limitations of their mindset. This may include checklists to analyze and uncover what constraints guide thinking, or a comparison between mindsets among different people.

Being conscious about the limitations of the mindset and the way we approach situations is the first step to agilize students' way of thinking. In order to be able to reframe perspectives and be capable of switching from one to another, a set of exercises will facilitate the creation of customized frames.

"Role-playing" adversaries and stakeholders is a way to temporarily adopt an outsider's point of view. "Comparing new with old frames" helps to find analogies of present situations and the past by seeking elements that are common between now and then, which ones have changed, and what can be learned from a situation that resembles the current one.

A set of exercises and workshops are used to train students in the process of generating ideas and evaluating those ideas. **Mind Agilizers** will focus on teaching different ways to generate solutions such as synectics, prototyping, lateral thinking, provocation, sketching, and the use of "springboards" to articulate wishes to open up space for invention.

The sum of these **Mind Agilizers** will provide the students a framework for creativity required to tackle problems. **Creativity** can't be taught overnight, but the aim of these exercises is to indicate and demonstrate the actions and perspectives that, if used, and practiced on a regular basis, can provide a more robust approach to the task of problem solving.

System Element	EMS	Polyzign	7

Originator
Steven Babitch

Contributors

Sources

SuperSet Element(s)

SubSet Element(s)

Related Elements
Design Methods
Design Qualities
Policy Domain Knowledge
Curriculum Development
Team
Jobnet

Description

Education for Policy Design Synthesis is PolyZign is the set of processes through which design thinking and policy planning can be fused throughout the curriculum of the Education for Policy Design Synthesis.

Properties

- A process
- A software application
- A workshop
- A series of exercises

Features

- Links appropriate design methods with policy course work
- Allows the creator(s) to determine what design methods are most appropriate for a given policy topic, course, or exercise
- Allows students to determine what design method might be most appropriate for a specific situation or problem
- Allows students to track their progress toward fulfilling requirements of design and policy

Version: 1 Date: 6 December, 2005 Date of Original: 18 November, 2005

System Element	EMS	Polyzign	7

F10. Teach Information Gathering
F11. Teach Observation Techniques
F12. Teach Design Analysis
F13. Teach Design Synthesis
F14. Teach Conceptualization
F15. Teach Visualization
F16. Teach Human Factors
F17. Teach Prototyping Methods
F18. Teach Context Awareness
F19. Teach Design Frameworks
F20. Teach Group Dynamics
F21. Teach Communication
F22. Teach human-centeredness
F23. Instill environmental awareness
F24. Promote proactivity and optimism
F25. Teach flexibility
F26. Teach multifunctionality
F27. Teach systemic vision
F28. Encourage curiosity
F29. Teach language sensitivity
F30. Teach teamwork affinity
F31. Teach solution combination
F32. Teach self-governing practicality
F33. Teach to work with qualitative information
F34. Teach quantitative analysis
F35. Teach ethics
F36. Teach advocacy
F37. Teach contextual awareness
F38. Teach leadership and governance
F39. Teach prioritization
F40. Teach causal theory
F41. Teach decision-making
F42. Teach negotiation
F43. Teach persuasion
F44. Teach communication
F45. Learn diplomacy
F46. Teach mobilization

Importance of user-centered design not understood
Inability to integrate several functions into one solution
Inability to see complex things as systems
Inability to see how other disciplines can improve their practice
Difficult to change thinking process
Students have different levels of knowledge and experience
Students have different comfort levels with ambiguity
Unable to define details of courses
Difficult to compile all courses
Unable to track progress
Difficulty in leveling the field in terms of student skill sets

Discussion

It ensures that these two seemingly disparate disciplines remain not in silos, but rather in conjunction with each other to ensure a richer, more cross-functional education. If design and public policy arenas are treated separately throughout the curriculum, i.e., design courses separate from and independent of policy courses, the goal of program – developing graduates and candidates that use design thinking to create better policy – will be much more difficult to obtain.

Faculty use the **Polyzign** process to develop courses that fuse design thinking, whether through design-related exercises, methods, or tools with topics or coursework of public policy. The faculty member could browse all of these in the **MethaDesign Database**. Within this database are descriptions of all of the methods that have been developed thus far as well as a comprehensive demonstration of examples indicating when you might use each method. Because design method continues to evolve, so does this dynamic database. Faculty are encouraged to create and modify methods to fit the coursework and course topics, which is what design thinking is about: finding innovative ways of solving problems.

Version: 3 Date: 6 December 2005 Date of Original: 18 November 2005

Discussion con't

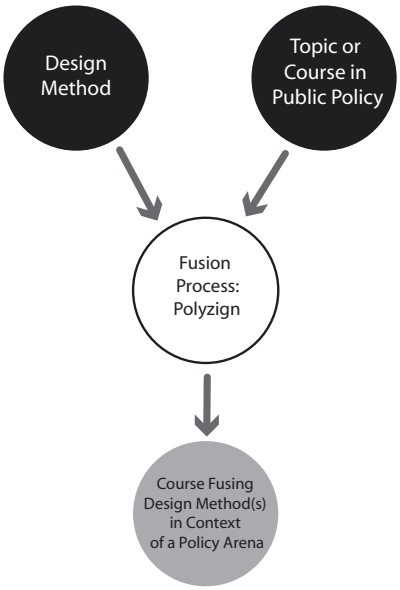
For example, a faculty member, perhaps a member of the **Curriculum Development Team**, might be teaching a course in the Education for Policy Design Synthesis program on healthcare policy reform. As part of the coursework, students must analyze a case study on a specific healthcare reform issue and what happened as a result of the enacted policy. The next step in the coursework is to determine what could be done to improve the situation or how the issue could have been considered differently such that the unintended or negative consequences that resulted could have been avoided. The course goal might be to get students to think differently and out of normal conventions in order to develop better policy, in this case better healthcare reform policy. From here, students are to synthesize a solution or solutions that would help enact better policy.

In this situation, the faculty member considers what design methods might be used to perform analysis, synthesis or both for the course topic. The faculty member teaching this particular course will engage in the Polyzign process to determine what design methods and exercises might be most applicable to the coursework.

This involves searching through the **MethaDesign Database** to find the most appropriate means of using design thinking. The faculty member might browse the database and find **Provocative Ideation**, the set of methods used for generating ideas. The faculty will then look into what methods there are for brainstorming and choose one or multiple methods he or she finds most appropriate. In this case, students might use **Future Vignette**, a tool that allows you to imagine a future ideal scenario and work towards that goal. The database will have examples of how the brainstorming methods are used, in what context, and what requirements there are to carry out the exercise.

The challenge of bringing design thinking into the policy arena is that they seem vastly different. At its core, policy planning and the policy making process is a combination of research and interpersonal relationship oriented procedures. Design thinking is a means of approaching the policy making and planning process that is fundamentally different from other problem solving approaches.

Students can use the **Polyzign Process and Tool** in interesting ways. The **Polyzign Tool** can be accessed via **The Brain**. They can use it to determine what design methods might be most appropriate when solving a problem as faculty do. They can also use it to build and track their curriculum progress throughout their time at EPDS as well as determine if the curriculum matches their career path. **JobNet** helps to facilitate this. They can use it to ensure they cover core requirements and balance their coursework in design and policy. Students coming in with backgrounds in design may need to spend more of their time at EPDS focused on policy coursework. But again, it is essential that they see both in action together.



System Element	EMS	GoodCitizen	8

Originator
Christine Kim

Contributors

SuperSet Element(s)

Related Elements
Student Immersions

Sources
http://www.terradaily.com/2004/041019040024.95rx88xz.html

McCoy, Katherine. **Good Citizenship.** In Heller and Vienne, Eds. **Citizen Designer** (pp2-8). *New York: Allworth Press, 2003.*

SubSet Element(s)

Description
Good citizen is a tool that helps teach social and environmental responsibility and awareness to help students understand the consequences of the decisions they make to the environment around them.

Properties
- Experiential learning tool
- Citizen scenario tool
- "Cause and effect" tool
- Environmental responsibility tool
- Field trips

Features
- Helps teach students how their decisions affect the environment
- Instills responsibility in students' policy design thinking
- Incorporates social responsibility in decision making process
- Creates a way for students to give back to society and fosters thinking to create solutions that improve the environment

Version: 3 Date: 4 December 2005 Date of Original: 18 November 2005

System Element	EMS	Good Citizen	8

Fulfilled Functions

F22. Teach human-centeredness
F23. Instill environmental awareness

Design Factors

Difficult to teach sensitivity
Difficult to change behaviors
Difficult to instill human-centered values
Importance of user-centered design not understood
Hazardous environmental global situation underestimated by students
Inability to see complex things as systems
Unable to self govern practically

Discussion

Good Citizen is a tool that helps teach social and environmental responsibility and awareness to help students understand the consequences of the decisions they make to the environment around them.

Good Citizen's experiential education can be delivered through experiential immersion trips as a part of **Student Immersions.** Experiential education helps build student awareness by having students experience things firsthand. These experiences allows students to understand and be aware of the things the experience taught them, encouraging them to become more responsible designers. Field trips and excursions can be taken to landfills and other interesting locations that teach students about the environmental consequences of a policy that was made.

To teach social responsibility, social projects can be built into school projects, or students can engage in volunteer work, such as teaching children about design. The EPDS program can partner with different organizations to provide access to various social opportunities that help students develop into citizen designers. "Designers must be good citizens and participate in the shaping of our government and society. As designers, we could use our particular talents and skills to encourage others to wake up and participate as well." (McCoy) **Good Citizen** helps students develop a human-centered and environmental concern in their decision-making process.

Many students underestimate the present global environmental situation, and often fail to see how it is related to policy design. Many people are aware of the consequences pollution has on the environment, but are not as aware of the fact that it also affects people through contamination. Demonstrating how contamination not only affects our environment, but also within students' personal lives can show how humans are not immune from the effects of pollution. In the European Union, the blood tests of 13 ministers revealed they were contaminated with chemical pollutants from sofas, pizza boxes, and pesticides (www.terradaily.com). **Good Citizen** takes into account the ramifications of policy design decisions on the environment.

Good Citizen allows students to chart out and analyze the potential consequences from their decisions. A simple decision tree eventually builds up to more decision trees, showing the results of both intended and unintended consequences to the surrounding people and environment.

GoodCitizen attempts to broaden the students' horizon to look past immediate goals, and to incorporate a more complete, altruistic vision.

Version: 3 Date: 4 December 2005 Date of Original: 18 November 2005

System Element	EMS	Strategem	9

Originator
Christine Kim

Contributors

Sources
Keeley, Larry. *Framework Pack*, **Design Planning**. Fall 2004.

SuperSet Element(s)

SubSet Element(s)

Related Elements
Methods Database
The Brain

Description
Strategem is a tool to teach students how to use business frameworks, create strategic plans, and to think strategically.

Properties
- Business frameworks
- Link to Design Methods Database
- Strategy simulations
- Strategic diagram creation tool
- Environmental strategy tools
- Information and resources, such as articles, examples of strategic plans, and case studies

Features
- Teaches students how to use business frameworks
- Teaches students strategic thinking and decision-making skills
- Creates visual models of strategy that can be printed, e-mailed, or saved in a presentation
- Teaches students about corporate responsibility and environmental strategy

Version: 3 Date: 4 December 2005 Date of Original: 18 November 2005

System Element	EMS	Strategem	9

Fulfilled Functions

F18. Teach Context Awareness
F27. Teach systemic vision
F37. Teach contextual awareness
F39. Teach prioritization
F40. Teach causal theory
F41. Teach decision-making

Design Factors

Difficult to change thinking process
Students have different levels of knowledge/experience
Students have no prioritization and decision making tools
No tool for time and resource management

Discussion

Strategem is a tool to teach students how to use business frameworks, create strategic plans, and to think strategically. It helps students make decisions by offering strategic simulations that students can go through to learn strategic thinking skills. Creating a strategy requires students to assess many different forces and variables, such as timelines, budgets and other strategic drivers affecting the situation. Using **Strategem** guides students through the process of evaluating strategies that were developed from the visions created using **Future Vignette**.

Using different business frameworks, students can craft a plan for a better policy design. Students can draw from a database of frameworks, such as Michael Porter's models and strategies, McKinsey's models, Era analysis, Mintzberg's strategic planning model, Positioning maps, Product planning maps, Conjoint analysis plots, Industry convergence, and numerous other frameworks (Keeley, 2004). A lifecycle analysis can also be conducted using Strategem to analyze environmental strategy. The system can identify the potential consequences of using different strategies by using input provided by the student.

Learning how to use these frameworks can be a valuable tool for decision-making and can be used to frame group discussions. Students can use **Strategem** during their meetings by filling it in with content about their specific issue. Strategem can produce diagrams from this input, which can then be e-mailed or printed out to help them think about their strategy and analyze their findings.

New business frameworks can be added to **Strategem** or modifications can be made to existing models. With its link to **The Brain**, **Strategem** can reference information and resources for the frameworks as well as information related to strategy, such as news articles and strategic plans to provide examples of strategic thinking in practice. A library of case studies that examine strategies of different organizations are also included in **Strategem** that can includes visual representations for analysis.

Version: 3 Date: 4 December 2005 Date of Original: 18 November 2005

System Element	E M S	Interplay	10

Originator
Christine Kim

Contributors
Enric Gili Fort

SuperSet Element(s)

Related Elements
The Brain

Sources
Institute of Design environment
Coffee houses
Museums
Alcoa building (http://www.aia.org/ca_alcoa)

SubSet Element(s)
The Union
Inspiration Area
Classrooms
Team Rooms
PlayRoom
Study Hall
Prototyping Lab
Teleconferencing Center

Description

An environment suited to all modes of a student's life to facilitate work, inspiration, and restful states. Interplay is the design of the environment to create a culture of positive interaction between students and to increase workplace productivity.

Properties

- Modular furniture for easy reconfiguration
- Museum to display history, photos, project work
- The Union for lounging and eating
- Inspiration area
- Classrooms
- Team Rooms area for teamwork and brainstorming
- Playroom for rejuvenation during study breaks
- Study hall for quiet, independent study
- Prototyping Lab
- Teleconferencing center

Features

- Facilitates the process of communicating and sharing ideas
- Fosters accidental engagement and impromptu meetings
- Facilitates the process of collective co-creation

Version: 3 Date: 4 December 2005 Date of Original: 18 November 2005

System Element	EMS	Interplay	10

Fulfilled Functions

F20. Teach Group Dynamics
F21. Teach Communication
F22. Teach human-centeredness
F24. Promote proactivity and optimism
F28. Encourage curiosity
F30. Teach teamwork affinity
F48. Share resources
F51. Collaborate
F52. Present materials

Design Factors

Insufficient funds to properly design interior
Unable to be enthusiastic and positive when designing

Discussion

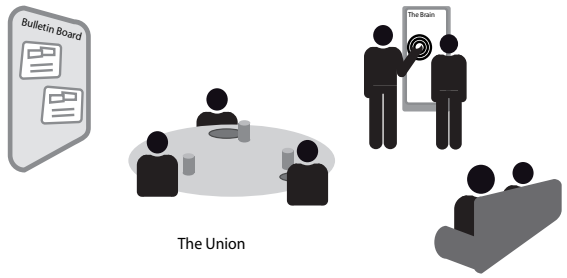
Interplay is the design of the environment to create a culture of positive interaction between students and their peers, faculty, administration and environment. This environment facilitates work, collaboration, inspiration, and restful states for the student. Because students may spend so much of their time at school for classes, they need dedicated space for individual work as well as areas for group work.

For the policy design student to achieve their best results, an environment that facilitates learning is needed. Part of this is related to the physical aspects of the environment such as good lighting, pleasant wall colors, soundproofing, and aesthetically pleasing surroundings. Another aspect of a productive environment is the students' attitude and well-being. If the students feel that they have a place to retreat to or a place to take a break from their studies, Interplay will provide some of that comfort to help ease the tension.

Interplay creates a few designated rest areas where students can escape, not feel as if they are at school and relax their mind before going back to their work. **The Union** and **PlayRoom** are two of these relaxation areas.

The Union

The Union is an area for students to relax, eat, take a break, and mingle with other students. The Union includes amenities such as couches, tables, food, and coffee, newspapers, and a bulletin board for posting announcements. These spaces will have comfortable chairs and sofas, a small kitchenette, vending machines with many healthy eating and drinking options.



The Union

PlayRoom

PlayRoom is an area students can go to let off some steam. With games, entertainment, a TV, and music, students can take quick breaks here to have some fun. Providing healthy breaks keeps students more productive with their work and makes the education more enjoyable.

Classrooms

Classrooms contain modular furniture that enable students to rearrange furniture easily for different classes. Round tables create an environment of collaboration rather than a lecture setting.

Interplay is designed so that there are dedicated areas for both group and individual work.

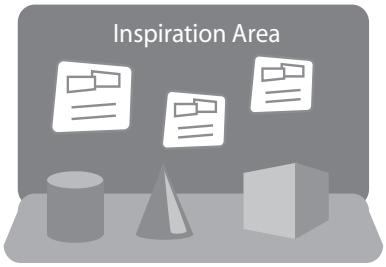
Classroom, Configuration 1

Classroom, Configuration 2

Discussion con't

Inspiration Area

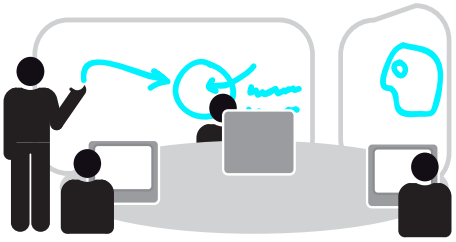
Inspiration Area is an area for students to go to for inspiration on ideas. They can read articles and other students have contributed, 3D model prototypes that have been created, or other interesting projects students are working on. Photos of interesting findings, people engaged in workshops, and **Student Immersions** are posted to create a positive community environment.



Inspiration Board

Team Rooms

Team Rooms are dedicated areas for group work. These rooms have plenty of whiteboards, markers, and other supplies that are useful for team deliberations, and brainstorming, allows groups to have private or semi-private spaces. Some rooms have modular dividers so they can accommodate different size groups.



Team Rooms

Study Hall

With so much collaboration in the program, it is often difficult to find a quiet area for students to focus on their individual work. Rather than forcing students to go home to find quiet areas, **Study Hall** provides a separate room with individual cubicles where students go to work uninterrupted.

Study Hall

Teleconferencing Center

The **Teleconferencing Center** allows teams to interview people over a speaker phone, or work remotely with other team members in different locations.

Teleconferencing Center

Prototyping Lab

Prototyping Lab is an environment within the facility that enables students to build and test their ideas in a creative environment. This area facilitates the whole process of creation from sketching ideas, visualization, to prototyping.

Prototyping Lab

By creating an atmosphere of cooperation, inspiration and well-being, **Interplay** caters to the students' needs so that they may be more productive and have an enjoyable educational experience.

Scenario Classes have been pretty tough on Adam this semester. He is taking a full course load, and it seems like all the main deliverables are due at the same time. He feels like there is so much to do, yet little or no time to do it.

It is a long walk to school for classes everyday, and with winters in Chicago, it was a brutally cold trek in the mornings. But as soon as Adam walks into the policy design building, he begins to warm up quickly and his spirits are lifted. The school's warm and inviting interior design is a stark contrast from the drab and dirty concrete city landscape that he had just walked through.

At his desk, Adam puts his bag down, sets up his laptop and plugs in the power cord. Since the school is entirely wireless, Adam has no need to plug into the network. As he looks around the room to check out who was in today, he sees many heads buried in their computer screens, all typing and clicking away. Windows and skylights with natural light shined down, and the lights above were warm and bright.

Discussion con't

Walking into his first class, Adam sits down in the second row. Each desk had a power outlet for a laptop, and the desks were designed to allow them to swivel and tilt, making it easy to converse with other classmates or rearrange furniture to work in groups. After lecture, Adam and his team members decide to meet to go over some tasks for their final project. They walk to a **Team Room** down the hall. Once the door closed, the team starts talking. As they start brainstorming, Adam and his team write their ideas on the whiteboard walls. By the end of the meeting, the entire wall was filled with ideas. The team presses a button on the wall, enters their e-mail addresses, and the system captures a digital copy of their brainstorming session and e-mails it to them.

After another class, Adam was hungry and tired. He went upstairs to the student lounge to grab a granola bar and some vitamin water. He had another class in 2 hours, but he was so exhausted that he needed to rest. Next to the student lounge was a soundproof room with cots and alarm clocks. Adam goes in and grabs an hour nap so that he would be refreshed and alert for his next class and the long night of work ahead of him.

System Element	EMS	PolyDomain	11

Originator
Steven Babitch

Contributors

SuperSet Element(s)

Related Elements
PolyComm
Polyzign
Immersion

Sources
Team Deliberations

SubSet Element(s)

Description

Policy Domain Knowledge is the set of fundamental policy related topics that must be included in the EPDS program. Because of the nature of this program, it is essential that our graduates have the necessary skills and understanding of the public policy landscape. They need to be able to succeed in the context of advising policy makers in a variety of contexts. This does not mean they must be experts at every public policy domain. But they should have a generalist-level of understanding in public sector topics.

Properties

- Sets of knowledge
- Specializations – in a particular area of interest, e.g., healthcare, politics, education, the environment
- Specific topics
- Country specific issues, e.g., Natural Disasters, Emerging Markets, etc.

Features

- Provides public policy domain knowledge such that students and graduates can enter a policy arena or situation and delve into the issues with credibility
- Provides skills necessary to be a credible strategist or advisor in the policy planning process (or policy making role)

Version: 4 Date: 6 December 2005 Date of Original: 20 November 2005

System Element	E M S	PolyDomain	11

Fulfilled Functions

F34. Teach quantitative analysis
F35. Teach ethics
F36. Teach advocacy
F37. Teach contextual awareness
F38. Teach leadership and governance
F39. Teach prioritization
F40. Teach causal theory
F41. Teach decision-making
F42. Teach negotiation
F46. Teach mobilization

Design Factors

Student difficulty with quantitative skills
Lecture deficient for decision-making

Discussion

Students may enter the EPDS program with a variety of backgrounds including design or public policy. In order to enter the world of policy planning, advising, or making, they must have the **Policy Domain Knowledge** of the areas in which they will advise. This could include areas such as health, labor, and education policy. Other requirements would also include quantitative analysis, negotiation, economics, and organizational analysis. More specialized topics might include Regional Ecosystem Management, Global health diplomacy, poverty and social policy.

The key is to master these topics and how design thinking can create new ways of approaching these policy domains.

Version: 4 Date: 6 December 2005 Date of Original: 20 November 2005

System Element	EMS	PolyComm	12

Originator
Steven Babitch

Contributors

SuperSet Element(s)

Related Elements
Design Methods
Polyzign
Policy Domain Knowledge
Curriculum Development Team

Sources
Interview with Rachel Klein, Graduate of Harvard John F. Kennedy School of Government, Cambridge, MA

Team Deliberations

SubSet Element(s)
Negotiation Simulations

Description

Graduates of EPDS must being adept at the art (or skills) of PolyComm, the policy-related communication skills of negotiation, empathy, and diplomacy. These skills are typically considered "soft skills," perhaps with the exception of negotiation, which can be taught more explicitly. In addition to more concrete tools involved in the policy forming process such as quantitative analysis and policy domain knowledge, i.e., healthcare and educational policy, interpersonal skills are an essential set of more abstract traits required of effective policy advisors.

Properties

- A set of qualities of characteristics
- Abstract in nature, not concrete
- Traits that tend to be found in effective strategic planners and policy makers
- Workshop

Features

- Allows students to master the skills of negotiation, empathy, and diplomacy
- Allows students to critique each other on the basis of how successful they were able to facilitate a discussion or negotiation

Version: 4 Date: 6 December 2005 Date of Original: 18 November 2005

System Element	EMS	PolyComm	12

Fulfilled Functions

F35. Teach Ethics
F36. Teach Advocacy
F38. Teach Leadership and Governance
F42. Teach Negotiation
F43. Teach Persuasion
F44. Teach Communication
F45. Learn Diplomacy
F46. Teach Mobilization

Design Factors

People avoid face to face communication
Unable to practice negotiation techniques live, teach negotiation
People don't possess interpersonal skills

Discussion

The policy making process requires a real understanding of building relationships, interpersonal skills, empathy, diplomacy, and negotiation. These are not easily taught, and today's public policy educational programs may not effectively instill these traits in its students. Teaching these skills is no easy task, but is a worthwhile pursuit. Some policy makers don't understand or possess these "soft skills" and hence fail (in unforeseeable ways) to create effective policy. (Source: Rachel Klein, title, organization and graduate of the Harvard Kennedy School of Government, Cambridge, Massachusetts)

Negotiation is about gaining information. It is also about gaining knowledge about what other parties know, what they don't, and how each piece of information can help or hinder each party. During a negotiation, it is critical to understand what each party is trying to achieve, what each party's best alternative is, and what the other parties are bargaining with and what they would or would not collaborate on.

When teaching negotiation, the goal is to simulate as accurately as possible a situation in which two or more parties (or students/student teams) can engage each other in the process. In order to provide the desired atmosphere when teaching negotiation, the stage should be set such that you can provide all of the factors raised above. This could be provided in a simulated setting or through a situation in which students can participate in or "shadow" a real negotiation.

Negotiation Simulations are simulated experience in which students participate in simulated negotiation situations. Students are each given sets of information about what they know as well as what they might know about the other parties involved in a negotiation. After given time to absorb and study the information given, they participate in the simulated negotiation. This may involve two or more parties who each have their own agenda.

The difference between this type of negotiation simulation and others taught, for example at Harvard's Kennedy School of Government, which is primarily what was described above, is that there will be a facilitator or team of facilitators, who will play the "designer," "design team," or "innovation strategist" role. This individual or team is trying to satisfy as many party agendas as possible and develop a comprehensive solution rather than satisfy one at the expense of another. They will call upon design method and design thinking to determine how they can best approach the problem. Another option could involve all teams or parties using design thinking and method to find comprehensive solutions.

Version: 4 Date: 6 December 2005 Date of Original: 18 November 2005

System Element	EMS	Leadership	13

Originator
Steven Babitch

Contributors

SuperSet Element(s)

Related Elements
PolyComm
Polyzign
Immersion

Sources
"On Public Sector Innovation" Larry Keeley, April 2005, Doblin Group

Team Deliberations

SubSet Element(s)
Leadership Definition
Show Me Workshops

Description
Leadership is the quality and set of skills required to be an effective leader.

Properties
- Leadership is the characteristic
- Abstract in nature (qualities)
- Concrete in nature
- Exercises
- Process

Features
- Provides public policy domain knowledge such that students and graduates can enter a policy arena or situation and delve into the issues with credibility.
- Provides skills necessary to be a credible strategist or advisor in the policy planning process (or policy making role)

Version: 2 Date: 6 December 2005 Date of Original: 1 December 2005

System Element	EMS	Leadership	13

Fulfilled Functions

F43. Teach persuasion
F44. Teach communication
F46. Teach mobilization

Design Factors

People don't possess ability to persuade
People are good at talking, not doing
Difficult to teach intuitive skills

Discussion

Leadership is a critical skill to have in the field of public policy. Students at EPDS must learn to master this skill because graduates of the program are expected to advise leaders in government, institutions, and NGO's in roles such as strategic planning, policy planning, or policy advising. They will help cities define their "micro-dominance," or their niche leadership in the world. For example, Chicago is a micro-dominance center for Theater. Singapore is developing a micro-dominance in the Life Sciences. It will take people with sound leadership and communication skills to step into these kinds of planning roles. EPDS graduates will have those skills in place.

Various exercises can be created to develop EPDS students into future leaders in the public policy sector. Following are two examples:

Leader Definition is the process that EPDS students will use when enrolled in team-based coursework. First, team members will provide their backgrounds to the faculty to ensure balance on teams and to ensure there is no concentration of any one skill on a team. Once teams are formed by the faculty, each team will define the roles and responsibilities of the team leader. Depending on the length of the course, a rotational schedule will determine who is team leader and when. This ensures all team members will have a chance to be a team leader. Team member evaluations will take place to show team members how they have performed, what each did well, and what each needs to improve upon.

Show Me Workshops will help students hone their leadership and communication skills. Projects from courses taken can provide topics for the seminars, or students may be given new topics to prepare and present. The group will evaluate how effective each student was in conveying the message of the presentation. Depending on the type of presentation, students may be trying to persuade, mobilize, or simply summarize an idea or topic.
These are the types of activities or exercises needed to produce effective leaders. Without the ability to communicate ideas effectively, it is difficult to expect that ideas be understood and used by policy makers or other organizational leaders. EPDS students will take these steps toward becoming those types of effective leaders.

Version: 2 Date: 6 December 2005 Date of Original: 1 December 2005

System Element	EMS	Instill-ation	14

Originator
Sarah B. Nelson

Contributors

SuperSet Element(s)

Related Elements
Cerebellum Project
Management Tool
Contact Tracker
Liaisons
Hippocampus Knowledge Base

Sources
ID Research and Demo
Traditional Master's Thesis systems
Internship programs

SubSet Element(s)
Instill-ation Workshop
Instill-ation Advisor
Instill-ation Defense

Description

Students complete their EPDS work and demonstrate their skills with a significant thesis-like project for a non-profit or government agency.

Properties

- A final demonstration of the student's skills
- A work-experience program
- A partnership building tool
- Support system made up of both advisors and students

Features

- Allows students to apply their skills
- Builds relationships between program and potential employers/partners
- Demonstrates the capabilities of design thinking within a policy environment
- Provides a safe environment for students to produce real world solutions
- Builds a collaborative community amongst students
- Builds a strong relationship between program and potential employers

Version: 2 Date: Nov. 15, 2005 Date of Original: Nov. 26, 2005

System Element | EMS | Instill-ation | 14

Fulfilled Functions

F10. Teach context awareness
F11. Teach information gathering
F12. Teach observation techniques
F13. Teach design analysis
F14. Teach design synthesis
F15. Teach conceptualization
F16. Teach visualization
F17. Teach human factors
F18. Teach design frameworks
F19. Teach group dynamics
F20. Teach communication
F21. Teach user-centeredness
F22. Instill environmental awareness
F23. Promote proactivity
F24. Teach flexibility
F25. Teach multi functionality
F26. Teach systemic vision
F27. Teach language sensibility
F28. Develop teamwork affinity
F29. Teach to combine solutions
F30. Teach self-governing practicality
F31. Teach ability to work with qualitative information
F32. Teach Quantitative Analysis
F33. Teach Empathy
F34. Teach Leadership and Governance
F35. Teach Decision Making
F36. Teach Ethics
F37. Teach Negotiation
F38. Teach Persuasion
F39. Teach Communication
F40. Teach Diplomacy
F41. Teach Mobilization
F79. Establish Relationships
F104. Help students plan career path
F105. Place students in internships/jobs

Design Factors

Difficult to teach sensitivity
Evaluation and feedback may be subjective
Difficult to teach how to filter data for relevance
Difficult to teach students to remove bias
Assessment can be subjective
Difficult to change thinking process
Difficult to teach divergent thinking
Difficult to teach students to see subtleties
Difficult to instill human-centered values
Difficult to determine when to use appropriate tool
Students many be resistant to teamwork
Students may be uncomfortable with presentations
Importance of user-centered design not understood
Unable to be enthusiastic and positive when designing
Unable to envision adaptive solutions
Inability to integrate several functions into one solution
Inability to see complex things as systems
Inability to see how other disciplines can improve their practice
Unable to collaborate within a team
Lack of inventiveness to integrate solutions
Unable to self govern practically
Unable to consider quality
Difficult to change thinking process
Students have different comfort levels with ambiguity
Students have different levels of knowledge/experience
Student difficulty with quantitative skills
Students have a tendency to be ethnocentric
Student have no prioritization and decision making tools
Students have different ethical standards
Unable to practice negotiation techniques live
Difficulty in leveling the field of in terms of student skill sets
People don't possess natural ability of persuasion
Difficult to build confidence and overcome shyness
Difficult to build a case targeted to unfamiliar audiences (persuasion, communication)
Difficult to teach intuitive skills, which is often an experiential-based skill set

Discussion

Instill-ations serve two important purposes for EPDS. As a practical demonstration of a student's skills and academic achievement, **Instill-ations** ensure faculty that graduates can uphold the standards of the institution. **Instill-ations** also help EPDS build strong relationships with the partner institutions Finally, Instill-ations provide a positive, real-world example of design thinking at work in a policy environment.

During the final portion of the student's EPDS experience, the student works with a local government agency, a non-profit organization, or a small business involved in policy design. The student works closely for the client as either part of a policy design team or away from the client in a consulting capacity. The student is supported in this work at EPDS by a faculty **Instill-ation Advisor** and by peers in an **Instill-ation Workshop**. Project management and communication is handled in person and with the assistance of tools like **Cerebellum** and **The Brain**.

First, **Instill-ation** clients and students are matched together. An ideal **Instill-ation** client has a significant policy design problem that would benefit from design thinking. The project should also be well-suited to a student's skills, background, and interest. The **Instill-ation Advisor**, a faculty member, works closely with **Liasons** to match students with clients.

Once a client and student have been matched together, the student begins a discovery process. During the discovery process, the student and client, with the guidance of the **Instill-ation Advisor**, set the goals of the project and establish the working terms. During the course of the project, the student has the support of both the **Instill-ation Advisor** and the **Instill-ation Workshop**. Once the project is over and an **Instill-ation Defense** is successfully completed, the student's work is saved to the **Knowledge Exchange** for future reference.

Instill-ation Workshop

The **Instill-ation Workshop** is a central component to the

Discussion con't

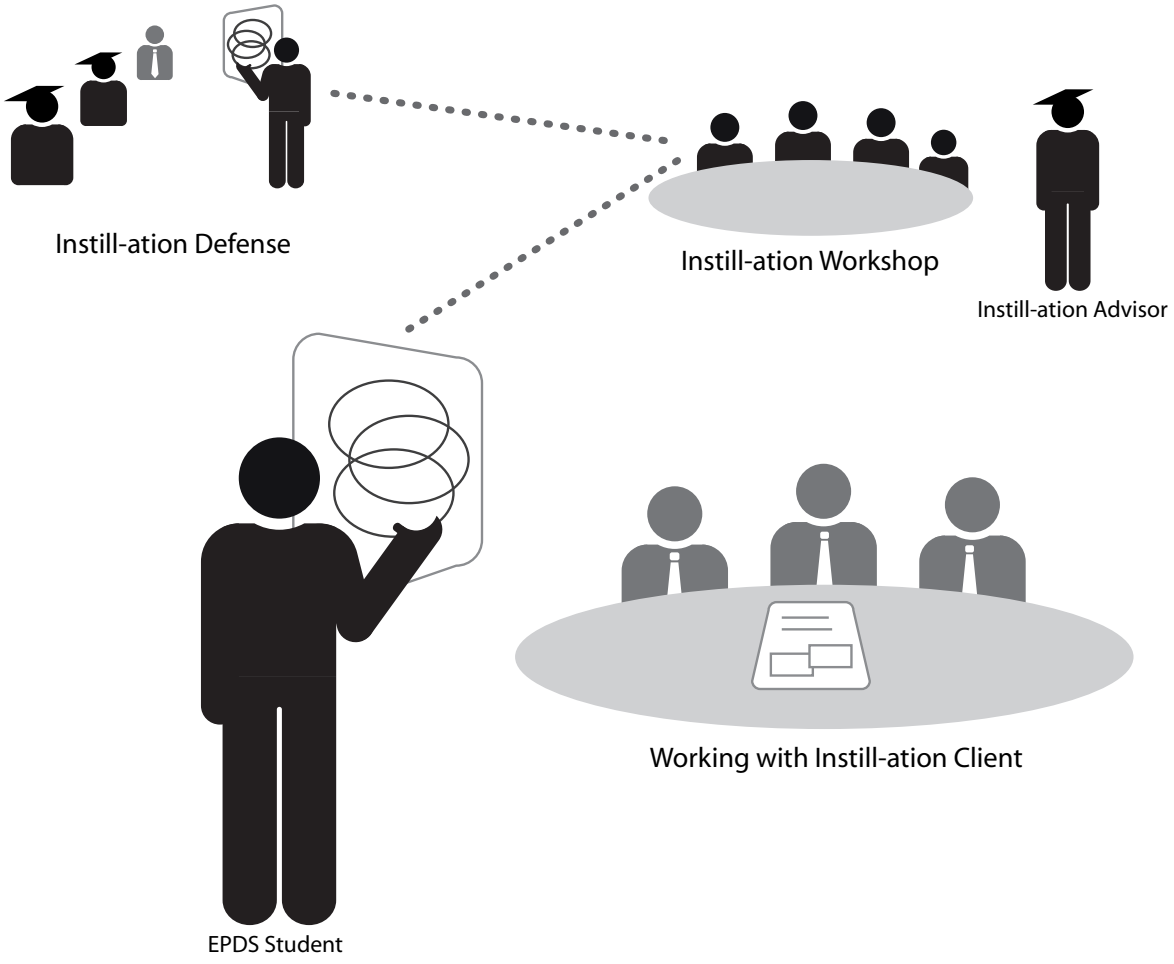
Instill-ation educational support system. The **Instill-ation** Workshop is taught by an **Instill-ation Advisor** and attended by all **Instill-ation** students. Members of the **Instill-ation Workshop** can bring their client work to the group for advice and support. Techniques and professional practices are further developed through lectures, readings, and discussion.

Instill-ation Advisor

The **Instill-ation Advisor** is a member of the EPDS permanent faculty and is charged with supporting students throughout their final work at EPDS. In addition to one-on-one meetings with **Instill-ation** students, the **Instill-ation Advisor** plans workshop sessions to ensure all students have the tools they need to succeed.

Instill-ation Defense

At the project's end, the student presents their final work to a defense committee. The committee is made up of the **Instill-ation Advisor**, one to two key client contacts, and two additional professors or professionals of the student's choice. This committee evaluates the quality of the student's work. A successful **Instill-ation Defense** leads to the student's graduation.



System Element	EMS	Recruitment System	15

Originator

Yanin Kasemkosolsri

Contributors

Sarah Nelson
Steve Babitch

SuperSet Element(s)

Related Elements

My Voice
Comparative Analysis
Alternate Calendar
Job Net
Contact Database

Sources

Basecamp (www.basecamphq.com)
Microsoft Project
Personal Experience

SubSet Element(s)

Recruitment Tool
Recruitment Team
Recruitment System
Communication Material

Description

The recruitment tools and data to gather, identify, collect applicants' information.

Properties

- A web-based electronic tool
- Database of application information
- Recruitment tool to evaluate applicants
- Events for the recruitment program
- Team of people who work on recruitment events
- Promotion material

Features

- Used in each recruitment processes
- Plans the schedule for recruitment time
- Gather all applicant's information and compare
- Input all recruitment information
- Houses applicant data
- Keep and collect data in the system
- Host recruitment events
- Monitor applicant qualifications

Version: 3 Date: 4 December, 2005 Date of Original: 17 November 2005

System Element	EMS	Recruitment System	15

Fulfilled Functions

F7. Evaluate learning
F9. Track progress
F44. Assess quality
F45. Perform research
F48. Assess needs
F56. Measure success
F61. Recognize achievement
F68. Evaluate candidates
F88. Document influence
F98. Develop application process
F99. Recruit students
F100. Accept students
F101. Provide student support
F107. Evaluate alumni success
F108. Recruit faculty
F110. Evaluate faculty

Design Factors

Difficult to coordinate
Unable to track progress
Quality is difficult to access
Users may be in different locations
Difficult to uncover needs
Success is difficult to measure
Difficult to assess diverse backgrounds through standardized process
Difficult to assess soft skills
Unable to target appropriate audience
Insufficient applicant pool

Discussion

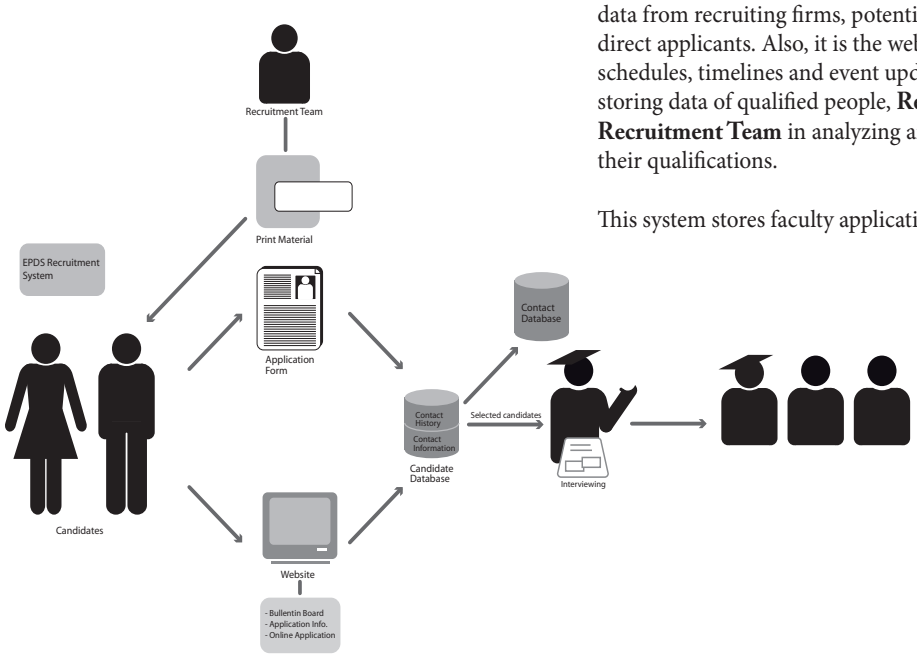
Recruitment System is a comprehensive system used for planning, implementing, and assessing recruitment events and activities. It is composed of tools, teams, materials, and the system.

The first component is called **Recruitment Tool**. It identifies tools to use in each recruitment activity. It contains various tools and methods for use in recruitment. It is comprised of tests, activities, and interviews. These tools can be applied with each other simultaneously for test applicants' performances in both IQ and EQ. To determine what tools to choose, EPDS staff must a have recruitment plan set before selecting a method.

The second component is the team of people who engage in the recruitment event called the Recruitment Team. The team comprised of staff, faculty and volunteer students. The team also gathers all applicant information and compares these with Recruitment Tools. The main task of the Recruitment Team is to plan, prepare recruitment materials, implement plans, organize events, collaborate on teams of people, and assess the progress by using Assessment Tool. This team must be trained well in coordinating different groups of people. They have to be able to comprehensively explain every step from introducing the program to the end of application process. It is necessary to acknowledge and make sure that each candidate receives all the important information.

The third compartment is called **Recruitment Material**. These are the material resources, comprising of recruitment tests and a software test program to evaluate the qualifications of applicants. **Recruitment Material** includes communication materials, both on-line and in print, application forms, flyers, program brochures, an event calendar, and all information that details the recruitment program for applicants. With all three components, **Recruitment System** is the database system that provides the entire system with the data used during the process of recruitment. It is the archive system that receives application data from recruiting firms, potential employers, partners and direct applicants. Also, it is the web database for providing news, schedules, timelines and event updates about recruitment. By storing data of qualified people, **Recruitment System** assists the **Recruitment Team** in analyzing and monitoring candidates and their qualifications.

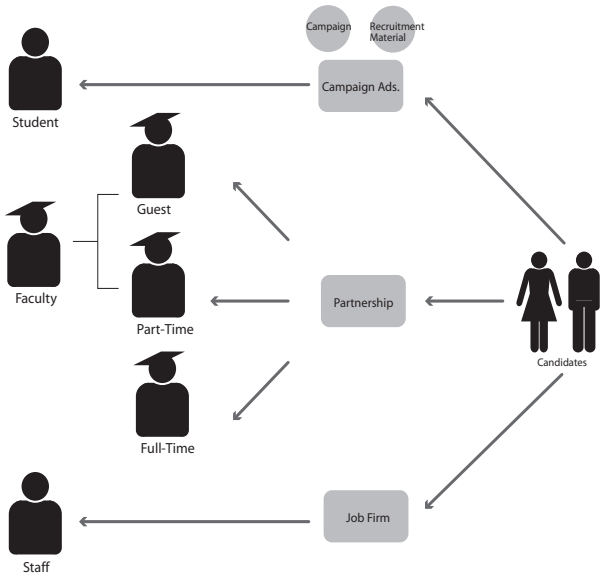
This system stores faculty application data as well, including full-



Discussion con't

time, adjunct, and guest lecturers. Also, it archives the candidate contact information for future reference.

For students, the **Recruitment System** links to JobNet to help students get internships and jobs efficaciously. Events by the **Recruitment Team** helps students get interviews from different organizations. Also, the team helps determine projects, programs, or research for EPDS students to join with partners. Students have to prepare their resume (C.V.) and send it to the **Recruitment Team** to maintain student records, arrange interview times, and organize interview locations.



System Element	E M S	JobNet	16

Originator
Christine Kim

Contributors
Enric Gili Fort

SuperSet Element(s)

Related Elements
Polyzign
Contact Tracker
Design Methods
Design Qualities
Policy

Sources
Vault (www.vault.com)
Job websites
Group deliberations

SubSet Element(s)
Career Profiler
Skills4Jobs

Description

JobNet is a web tool with a that matches EPDS students to positions in policy design based on criteria entered by both parties. It also helps students determine career options or plan their career and by researching job opportunities to match their skillset, or by learning what skills they need to acquire to meet the criteria for a desired career.

Properties

- Information resource for jobs
- CareerMatch that uses a questionnaire to match jobs to applicant's skills
- Skills4jobs provides skills required for different jobs
- Guidebooks for the job search process, industry information, and career paths
- Discussion board
- Surveys conducted of employers and employees
- Policy design news

Features

- Provides networking options/contacts
- Store current resumes online
- Both employers and jobseekers can post positions online
- Help students target their aptitudes and career potentials and match them to potential job opportunities

Version: 3 Date: 4 December 2005 Date of Original: 18 November 2005

System Element	EMS	JobNet	16

Fulfilled Functions

F108. Help students plan career path
F109. Place students in jobs
F111. Coordinate internshiops

Design Factors

Students' career goals not aligned with advisor's knowledge
Available opportunities and students' interests or skillsets not aligned

Discussion

Whether a company is looking for an intern, new graduate, or experienced hire, they need an efficient way to screen for potential new employees. **JobNet** is a web-based tool that helps match EPDS students to positions in policy design based on criteria entered by both the job applicant and employer. This interface is an information resource for any job that is related to the policy design field. Users can search a database for potential jobs opportunities in policy design, filtering for different search criteria, such as geography, position, potential salary ranges, and industry.

On **JobNet**, the user can find information about companies and organizations within an industry or detailed information about the organization. A questionnaire that helps target their aptitudes and career potentials can advise them on what positions they are qualified for, and others they may need to take additional courses for. The results of these questionnaires and searches can be stored in the user's profile. Users are assigned a user name and password that links their profile to **Design Methods** and **Polyzign**, which contain their curriculum and skills acquired through courses taken. Resumes can be stored online to be made available to employers.

Users can browse through surveys that provide inside information on what it is like to work in a certain organization or contribute to a discussion on topics related to careers in policy design.

In addition to employment services, **JobNet** will have a section devoted to news regarding the policy design industry. This may include current issue topics online or in print, video of trade conferences or seminars, and any additional information that the users of **JobNet** can post that may help users.

Scenario Robert was starting his final year at the policy design graduate school. However, he was still unsure of exactly what he wanted to do after he graduated. One day, Robert asked his policy design professor and mentor about his dilemma. The professor advised him to take an online career assessment questionnaire on the JobNet website and browse the site for any interesting articles. He also recommended checking the **Contact Tracker** to see if there were any alumni of the school who would be willing to talk to Robert about what potential jobs may be out there for him.

That night, Robert went onto the **JobNet** website. After filling out the quick profile and setting up a user name and password, Robert was set to start the questionnaire. After 25 minutes of answering 50 multiple choice questions, the program created a customized career assessment profile that was able to point out Robert's strengths, narrowed down what his interests were, and matched up industries that were compatible with his profile.

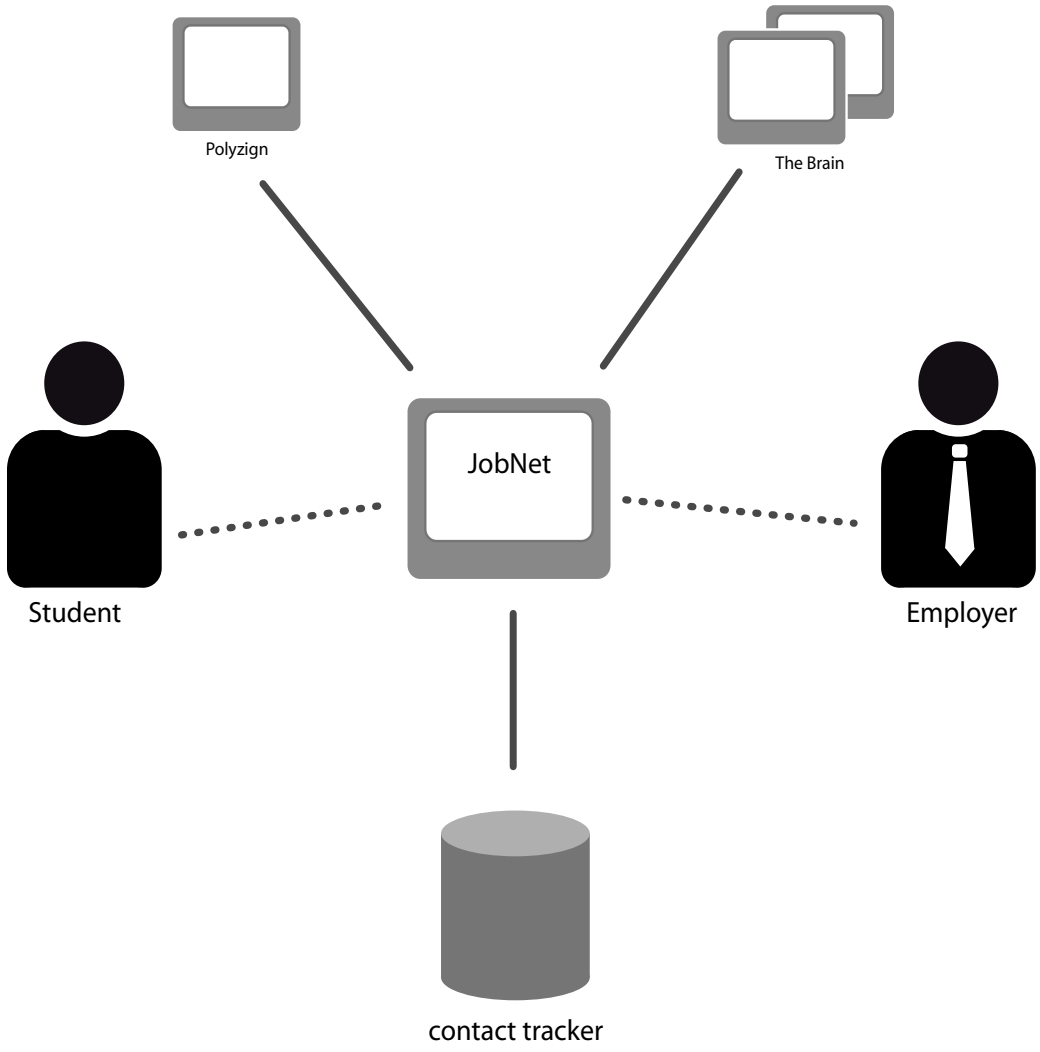
A list of 20 potential job opportunities matched up with Robert's profile. He looked through the list and by clicking on the company name, was able to find out more information about the company, such as financial information, recent news articles about the company, culture, reviews, and a link to the company's website. Had Robert not used the **Career Profiler**, he would've spent days, maybe weeks trying to research companies and try to find companies that he was interested in.

After uploading his resume into **JobNet's** resume database, Robert browsed through **Contact Tracker** to see if there were any alumni that he might be able to talk to. Finding several names, he selected a couple of them to e-mail with questions. He then browsed through the discussion board and read about an interesting field that had not showed up on his career profile. He decided to use the **Skills4Jobs** link to figure out what skills for needed for that job. He found out that if he was interested in this type of position, he could easily become qualified by taking only two more classes that would provide the skills he needed for the job. Robert decided to register for those two classes for his last semester. He was relieved that he was able to find this information before his last semester had started so that he knew which courses would help in the most in his career direction.

System Element	EMS	JobNet	16

Discussion con't

A few months before he graduated, Robert had interviewed with five interested firms who contacted him after viewing his resume on **JobNet**, and he received two offers from them. Throughout the recruiting process, Robert was very comfortable about the companies that he was interested in and definitely could see himself working for one of them. He was glad he included **JobNet** in his job search process.



System Element	EMS	Alumni Network	17

Originator
Yanin Kasemkosolsri

Contributors
Sarah Nelson

Sources
Team Deliberations

SuperSet Element(s)

SubSet Element(s)
- Alumni Immersion
- Alumni Organization
- Alumni Website
- Alumni Team

Related Elements
- Contact Tracker
- Les Liasons
- EDPS/Green Drink
- Promulgator
- Communication Strategy Builder

Description

The convergence tool for communicating and collaborating with alumni in order to maintain relationships and encourage alumni to support the program

Properties

- A web database for alumni information
- Website to interact in various issues
- Team members
- Web board
- Blog
- Bulletin board to inform and update news and events

Features

- Identify and inform the alumni personal information from past-present
- Identify the update news and upcoming events
- Receive the news from school/program the upcoming evens
- Interact with each alumnus
- Keep connections
- Recommend recruitment, seminars, and activities
- Share opinions, issues, discussions
- Associate with school/program

Version: 3 Date: 3 December, 2005 Date of Original: 22 November 2005

System Element	EMS	Alumni Network	17

Fulfilled Functions

- F66. Secure sponsors
- F73. Host people
- F74. Exchange people
- F75. Host organization
- F79. Establish relationships
- F81. Strategize how to influence
- F82. Exert influence
- F83. Measure influencing results
- F84. Establish relations with top players
- F85. Promote faculty
- F86. Invite influencers to persuade
- F87. Learn from influence
- F102. Develop student activities
- F103. Manage student exchanges
- F106. Develop alumni network

Design Factors

- No means to get attention
- It is difficult to choose topics
- People don't speak the same language
- Relationship accords not fulfilled
- No means to identify who to influence
- No means to decide how to influence
- No means to execute influence plan
- No means to identify top players
- Lack of interest by top players
- Subjects of interest not matching
- Unable to decide the most adequate way to influence
- Unable to attract audience's interest
- No means to define subject
- Uncertain which knowledge is valuab
- Inaccessible staff
- Lack of student interest and participation
- Unable to contact alumni
- Inadequate alumni participation

Discussion

In order to build the Education for Policy Design Synthesis program, it is important to have a broad and influential network. From this perspective, the program needs to build strong bonds between groups of influential people and organizations. One of the strongest relationships to build is the alumni network because they form the group of people who support and potentially influence the program.

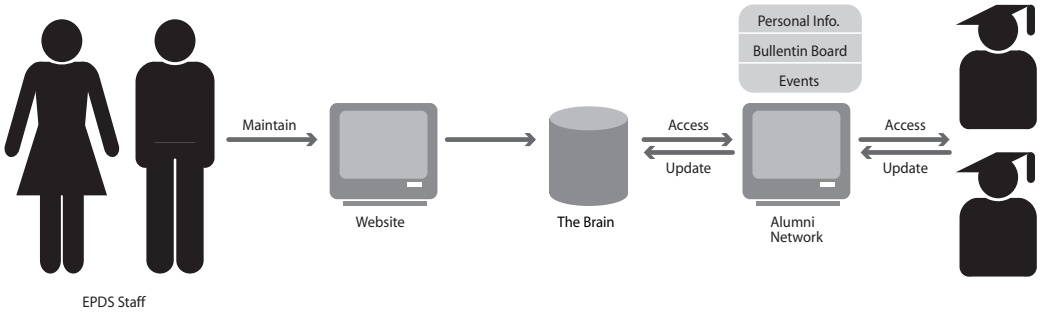
Alumni Network is the tool for communicating and collaborating with alumni in order to keep relationships with them, and allow alumni to impart their support and immersions to the program.

Alumni Immersion is a program that immerses the alumni and shares their knowledge, expertise and experiences through conferences, lecturers, and workshops. It allows them to share and build on the knowledge they have gained previously through the program.

Alumni Organization is the association for alumni to keep in touch with the program and support their careers. It also provides updates of personal alumni data, the EPDS society, and other knowledge resources. It runs alumni events to keep contact among alumni and faculty. **Alumni Organization** has an **Alumni Website** to allow alumni to contact each other. The **Alumni Organization** will send **Alumni Newsletters** to all alumni members to update with news and invite to any events. In turns this increases prestige for the school.

Alumni Team is the group of people comprised of alumni, faculty, and staff in order to coordinate, run, and host the alumni events with other groups of people. Also, they have to keep contact with alumni and provide resources for alumni through the **Alumni Website**.

The Alumni Website is the website for alumni to look up peers for the purpose of keeping contact and communication among the EPDS community. It also allocates the **Alumni WebBoard** to discuss any interesting and compelling issues to exchange for their opinions. Moreover, it posts upcoming events, conferences and programs, and extended courses on the board.



Version: 3 Date: 3 December, 2005 Date of Original: 22 November 2005

System Element	EMS	The Brain	18

Originator
Sarah B. Nelson

Contributors

SuperSet Element(s)

Related Elements
Contact Tracker
AlumniNet
JobNet
Liaisons
Interplay
Polyzign

Sources
Existing Model

Brain Kiosk from FXPAL Plasma Poster, Elizabeth Churchill Keynote Address, AWF, 2005.

SubSet Element(s)
Thalamus
Hippocampus
Cortex
Cerebellum
Brain Kiosk
MyBrain

Description
A communication, collaboration, and archiving system accessible by all members of the EPDS community.

Properties
- A web-based electronic information system
- Stores electronic documents
- Users can add, edit, and delete items
- Users can search
- Users can print and download items
- Users can access items from anywhere at anytime
- Users can save items they find to their own library of documents within the system
- An account management and permissions-based system
- Ties multiple systems together

Features
- Provides a central location for community knowledge and communication
- Provides a centralized point of access to all electronic data

Version: 2 Date: Nov. 15, 2005 Date of Original: Nov. 27, 2005

System Element | EMS | The Brain | 18

Fulfilled Functions

F42. Archive information
F43. Share resources
F46. Collaborate
F47. Present materials
F62. Publish student work
F63. Publish faculty work
F64. Publish partnership products
F65. Publish research results
F93. Develop record-keeping system
F94. Manage academic resources
F95. Manage technology resources
F96. Coordinate satellites
F106. Develop alumni network
F109. Support faculty

Design Factors

Difficult to Coordinate
No way to manage large amounts of data
People may not contribute information
Users may be in different locations
Materials are in different formats
It is difficult to keep track of goals
Lack of alumni participation
Unsure how to integrate with university systems
Resources not consolidated
Distance can be barrier to communication
Lack of student interest and participation
Distance can be a communication barrier
Unable to contact alumni
Inadequate alumni participation
Difficult to develop evaluation criteria

Discussion

All activities within EPDS require communication, collaboration, or archiving activities. **The Brain** will facilitate these activities by providing a central, web-based tool that can be accessed by members of the community from anywhere.

The Brain has four sub-elements, each of which satisfy four basic functions. Each will be discussed in detail in subsequent System Elements.

Thalamus The **Thalamus** is the central communication and information broadcasting system. Accessible from both PCs and a publicly placed kiosks, the Thalamus provides space for community discussions, sharing work, broadcasting messages and job posting, and a directory of community members.

Cortex The **Cortex** is used in classrooms to support learning activities.

Hippocampus The **Hippocampus** is the EPDS memory, storing research, projects, and artifacts produced by the community.

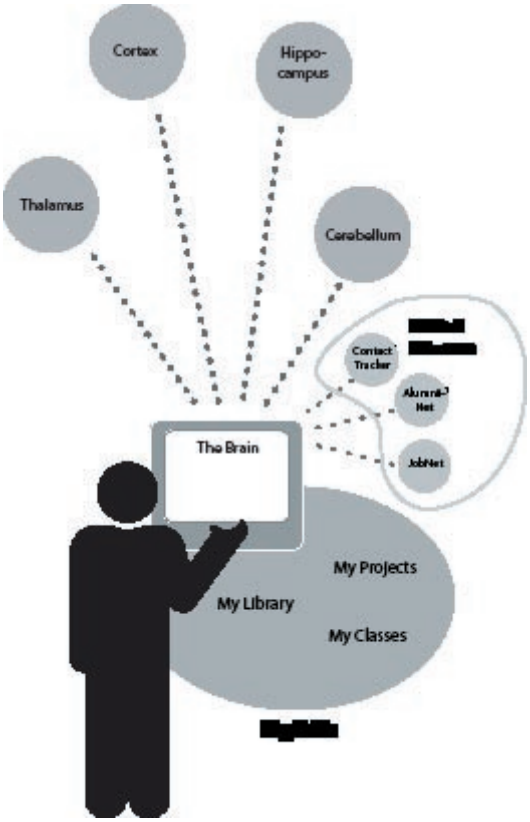
Cerebellum The **Cerebellum** is a project management facilitation tool that supports academic and administrative groups.

In addition to these four areas, **The Brain** also provides access to other databases throughout the program, such as **JobNet**, **AlumniNet**, and **Contact Tracker**. Access is controlled through an account management system maintained by a member of the IT staff.

Access is based on roles within the community. Typical roles might be: student, faculty, alumni, partner, staff, **Instill-ation** client. These roles can be further sub-divided as necessary at the program's discretion. Each role might have access to different information. For instance, students might have access to the **Cortex**, the **Hippocampus**, the **Thalamus**, and the **Cerebellum** but alumni might only have access to the Thalamus, **Hippocampus**, and the **AlumniNet**. Partners might only have access to certain components of the **Hippocampus**. **The Brain** should be maintained by an IT staff person who can create accounts and provide access to areas of **The Brain**.

My Brain

Users of **The Brain** can create their own home page called **MyBrain**. On this page, they can get quick access to their **Cerebellum** projects, to their **Cortex** classes or to documents saved from the **Hippocampus**. In addition, discussions or items of interest from **Thalamus** might also appear here.



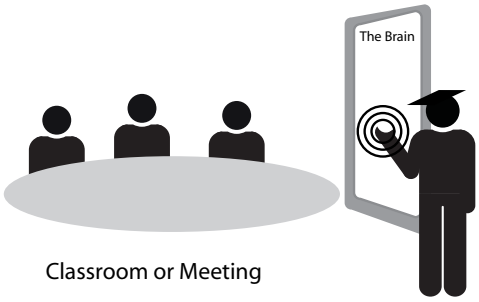
Version: 2 | Date: Nov. 15, 2005 | Date of Original: Nov. 27, 2005

Discussion con't

The Brain Kiosk

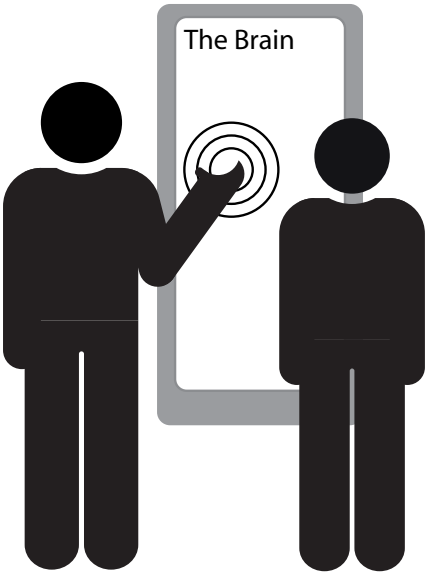
The Brain Kiosks are large touch screens located throughout the program. Using the same functionality as **The Brain**, **The Brain Kiosks** encourage casual exploration of non-traditional uses of information.

As part of the **Interplay** environment, **The Brain Kiosks** bring institutional information into a public context. If placed in public areas, like lounges, lobbies, or cafeterias, **The Brain Kiosks** can be used to broadcast information or encourage casual exploration. If placed in a classroom or working environment, users can access the **Hippocampus** for reference information or use the **Cerebellum** to manage group activities.



Classroom or Meeting

Brain Kiosk



Casual Usage

System Element	EMS	Hippocampus Knowledge Base	19

Originator
Sarah B. Nelson

Contributors

SuperSet Element(s)
The Brain

Related Elements
Instill-ation
Cortex Classroom Intranet

Sources
Existing Knowledge Base technologies
Existing librarian and archivist models
Existing library models

SubSet Element(s)
Archivist
Hippocampus Archive
Hippocampus Electronic Archive

Description

A program that promotes research, archiving, and the exchange of ideas.

Properties

- An archivist role
- A way to add, edit, and save electronic information
- A way to add, store, and preserve physical products
- A search and retrieval system

Features

- Gives institution a memory, ensuring prior work is available as a resource
- Provides quality assurance
- Aids program development and assessment by providing a record of achievement
- Promotes the exchance of ideas and builds community

Version: 2 Date: Nov. 15, 2005 Date of Original: Nov. 27, 2005

System Element | EMS | Hippocampus Knowledge Base | 19

Fulfilled Functions

F5. Gather materials
F42. Archive information
F43. Share resources
F46. Collaborate
F47. Present materials
F62. Publish student work
F63. Publish faculty work
F64. Publish partnership products
F65. Publish research results
F88. Document influence
F93. Develop record-keeping system
F94. Manage academic resources
F95. Manage technology resources
F96. Coordinate satellites
F109. Support faculty

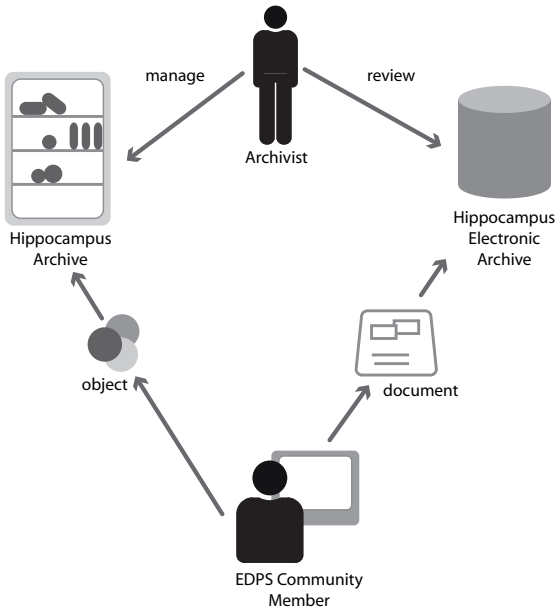
Design Factors

Difficult to Coordinate
No way to manage large amounts of data
People may not contribute information
Users may be in different locations
Materials are in different formats
It is difficult to keep track of goals
Lack of alumni participation
Unsure how to integrate with university systems
Resources not consolidated
Distance can be barrier to communication
Lack of student interest and participation
Distance can be a communication barrier
Unable to contact alumni
Inadequate alumni participation
Difficult to develop evaluation criteria

Discussion

Knowledge generated by EPDS is crucial to its ongoing growth and adaptation. Without a formal archiving system in place, information may be lost and work redone. Artifacts generated by EPDS may take either physical or electronic form. Regardless of format, this information must be stored archivally and made easy to access by all members of the community. The **Hippocampus** system provides several archiving methods, including **Hippocampus Archive**, a physical archive, **Hippocampus Electronic Archive**, a web-based system linked into **The Brain**, and an **Archivist** to manage and maintain quality.

Hippocampus resources are available not only to students and faculty but to the entire EPDS network of partners and alumni. Once research in completed, an article written, an image captured, or a project is wrapped up, artifacts are submitted to both the **Hippocampus Electronic Archive**, and, if necessary, to the **Hippocampus Archive**. Submitted items are reviewed by the **Archivist**, tagged appropriately, and made available to the community.



Hippocampus Electronic Archive

The **Hippocampus Electronic Archive** is a web-based knowledge storage system. Accessible by the whole community, electronic versions of documents, articles, and presentations are stored here. Items added to the **Electronic Archive** are tagged with metatags and can be retrieved using a robust search system.

The **Hippocampus Electronic Archive** can be accessed through **The Brain**. Users of **The Brain** can save discoveries for later use or refer colleagues to **Hippocampus Electronic Archive** entries. This sharing and distribution of knowledge supports both research and community building activities.

Archivist

The **Archivist** is a staff position that oversees, maintains, and assesses institutional knowledge. The **Archivist** plays a crucial role both in preservation and in ensuring that the quality of included work is high.
The **Archivist** is in charge of both the **Hippocampus Archive** and the **Hippocampus Electronic Archive**. The **Archivist** gathers and preserves physical items such as products, prototypes, books, and articles. The **Archivist** periodically reviews the **Hippocampus' Electronic Archive** to evaluate its usage and review the quality of information included. The **Archivist** may develop outreach programs to encourage participation in the **Hippocampus' Electronic Archive**. The **Archivist** will develop and implement a search and retrieval system for physical items and for electronic items.

Hippocampus Archive

The **Hippocampus Archive** stores both physical resources and artifacts from EPDS projects. Managed by the **Archivist**, the **Hippocampus Archive** preserves institutional knowledge and products for future use. A storage, search and retrieval system makes the **Hippocampus Archive** a useful resource for the EPDS community.

Version: 2 | Date: Nov. 15, 2005 | Date of Original: Nov. 27, 2005

System Element	EMS	Thalamus Communication Tool	20

Originator
Sarah B. Nelson

Contributors

SuperSet Element(s)
The Brain

Related Elements
My Voice
JobNet
AlumniNet
Liaison
Contact Tracker

Sources
Existing Model

SubSet Element(s)
Inspiration Board
Public Forum
EPDS Directory
Event Calendar
Announcement Engine

Description

A central communication and information broadcasting system.

Properties

- A web-based interface communication system
- Accessible from both PCS and a publicly-placed kiosk

Features

- Binds different web systems into a single portal
- Standardizes the interface across all databases
- Allows the sharing of data in different context

Version: 1 | Date: Nov. 15, 2005 | Date of Original: Nov. 15, 2005

System Element	EMS	Thalamus Communication Tool	20

Fulfilled Functions

F47. Present materials
F62. Publish student work
F63. Publish faculty work
F64. Publish partnership products
F65. Publish research results
F94. Manage academic resources
F95. Manage technology resources
F96. Coordinate satellites
F106. Develop alumni network

Design Factors

People may not contribute information
Users may be in different locations
Materials are in different formats
Lack of alumni participation
Distance can be barrier to communication
Lack of student interest and participation
Distance can be a communication barrier
Unable to contact alumni
Inadequate alumni participation

Discussion

The **Thalamus** is the central communication and information broadcasting system for EPDS. Accessible via **The Brain** from both PCs and publicly placed **Brain Kiosks**, the **Thalamus** contains space for community discussions, sharing work, broadcasting messages and job posting, and a directory of community members.

Inspiration Board

The **Inspiration Board** is a web-based free-flowing forum for the sharing of work, ideas, articles, and other knowledge of interest to the community. Any member of the community can post something to the **Inspiration Board**. Users of **The Brain** can sign up for notifications or add **Inspiration Board** postings to their **My Brain** pages.

Public Forum

The **Public Forum** is an asynchronous discussion system that allows members of the community to openly discuss important issues. Community members can start a thread or contribute to a conversation.

EPDS Directory

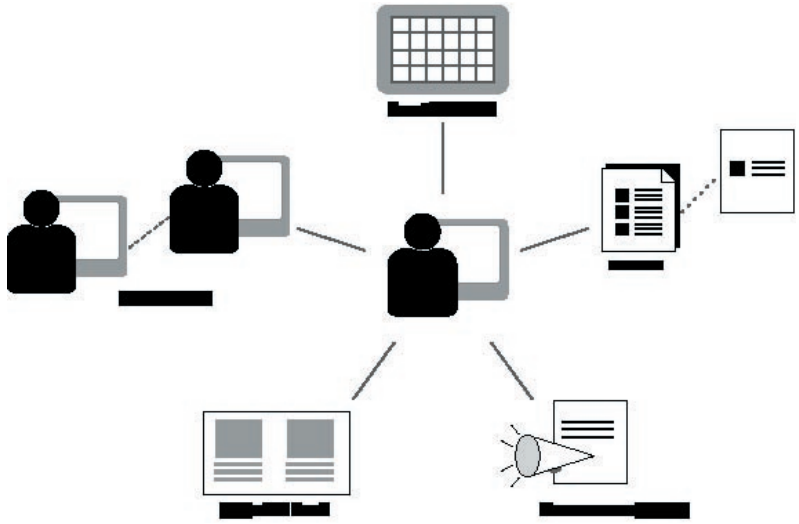
The **EPDS Directory** has all contact information for members of the EPDS community.

Event Calendar

The **Event Calendar** contains events from around the program and within the larger design and policy communities. Members of the community can submit postings to a central administrator. Events are sorted into categories for easy browsing.

Announcement Engine

Members of the community can post job postings or announcements that they would like the community to be aware of. For instance, a **MyVoice** forum might post requests for participation to **The Brain** using the **Announcement Engine**. That announcement would be posted to the **Thalamus**. Members of the community can request notifications of new messages and receive this message in their e-mail inbox.



Version: 2 Date: Nov. 15, 2005 Date of Original: Nov. 27, 2005

System Element

EMS **Cerebellum Project Management Tool** 21

Originator
Sarah B. Nelson

Contributors

SuperSet Element(s)
The Brain

Related Elements
Instill-ation
Collaborator
Implementation Protocol

Sources
Basecamp (www.basecamphq.com)
Microsoft Project
Personal Experience

SubSet Element(s)
GroupThought
FileTracker
BlogChat
Gabber
MileMarkers
AccountTracker

Description

A project management system, accessed through a web-based interface. This system allows any project group to share files, exchange ideas, track schedules and assignments, and develop ideas collaboratively.

Properties

- A web-based, data-driven application
- A tool for managing information associated with a project
- A collaborative writing tool
- A system for sharing and tracking versions of project documents
- An asynchronous discussion tool
- A task allocation and schedule tracking tool
- Has multiple user accounts
- Allows users to manage multiple projects and teams

Features

- Ensures team has access to files they need both at and away from the program
- Facilitates both distance and group work
- Provides a central resource for all materials related to the project
- Captures the history of the project for later use

Version: 2 Date: Nov. 15, 2005 Date of Original: Nov. 26, 2005

System Element	EMS	Cerebellum Project Management Tool	21

Fulfilled Functions

F43. Share resources
F46. Collaborate
F50. Establish priorities
F54. Specify changes
F95. Manage technology resources
F96. Coordinate satellites
F101. Provide student support
F109. Support faculty

Design Factors

Difficult to Coordinate
No way to manage large amounts of data
People may not contribute information
Users may be in different locations
Materials are in different formats
It is difficult to keep track of goals
Resources not consolidated
Distance can be barrier to communication
Lack of student interest and participation
Difficult to develop evaluation criteria

Discussion

Most projects can benefit from a systematic approach to project management. Software and web-based tools that support project management can ease a group's organizational burden and facilitate more efficient, even more creative work. **Cerebellum Project Management Tool** is a web-based project management tool available to all EPDS groups, whether academic or administrative. **Cerebellum** might be used in classroom projects, as part of an **Instillation**, by the **Curriculum Development Team** during course design, or by strategic initiatives throughout EPDS.

A successful group project has clearly articulated goals, specific, assigned tasks, and clearly identified roles for each member to play. Poor communication and document management can seriously hinder the progress of what might otherwise be a successful project. A project manager can help the group create and track the project's schedule, assign and track tasks, and manage files and shared documents. The project manager ensures that the project continuously moves forward and creates an atmosphere that supports good work from the team. **Cerebellum** further assists the project manager in these tasks and facilitates team communication.

The **Cerebellum Project Management Tool** includes several interrelated components that support project management activities and promote communication amongst team members. **BlogChat** and **Gabber** allow synchronous and asynchronous communication, saving this communication to an archive for later reference. **MileMarkers** provides scheduling and task tracking capabilities. **AccountTracker** manages user accounts and roles within **Cerebellum**. **FileTracker** allows the team to store and access files from anywhere through a central repository. **GroupThought** provides the collective authorship capabilities.

GroupThought

GroupThought is a collaborative writing tool that allows a group to collect, organize, edit, and save their thoughts in a centralized location. A web-based word processor, **GroupThought** allows team members to enter text and edit the text **GroupThought** by others. **GroupThought** tracks the contributions of each member and can reveal these associations as requested by the team. Possible applications for **GroupThought** include the collective development of agendas, meeting minute recording, brainstorm documentation, or collective document development.

GroupThought documents can be saved and accessed on multiple occasions. Once a **GroupThought** document has been completed, it can be exported to work in other software programs, such as word processors or layout programs. The file can then be saved for reference or further work to **FileTracker**.

Blogchat

BlogChat is an asynchronous communication tool that allows discussions to continue amongst the group after the conclusion of face-to-face meetings or **Gabber** interactions. **BlogChats** follow a blog-like format. Someone posts a discussion point, reference, or other statement. Members of the team are notified of this addition and are invited to participate in the **BlogChat**. Entries and discussions are saved for future reference.

Gabber

Gabber is a synchronous, chat-like tool that allows group members to communicate with each other in real-time regardless of their physical location. **Gabber** discussions can be archived within **Cerebellum** for later use. A **Gabber** meeting can be accompanied by images or make use of **GroupThought** to track ideas.

MileMarkers

MileMarkers are **Cerebellum's** scheduling and task tracking tools. Using accounts created in **AccountTracker**, the designated project manager can establish project milestones and assign tasks to team members. Team members can indicate when they have finished a task or reassign the task to someone else.

Version: 2 Date: Nov. 15, 2005 Date of Original: Nov. 26, 2005

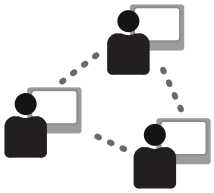
Discussion con't

AccountTracker

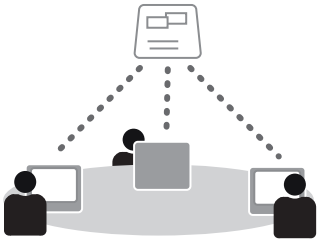
AccountTracker gives team members access to their Cerebellum project. Roles can be assigned within **AccountTracker** that give team members different access rights within **Cerebellum**. However, unlike many project management tools, all group members can access most core functions rather than relying on a project manager. The role of project manager can be assigned by the group but the **AccountTracker** system does little to limit capabilities.

FileTracker

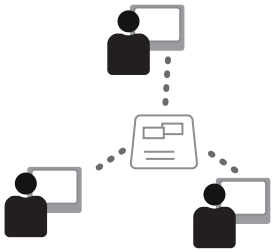
FileTracker is a storage tool and version tracking system for all files belonging to a specific project. Team members must be able to access, edit, and track versions of their work from anywhere.



Gabber & BlogChat



GroupThought



FileTracker

System Element

EMS **Cortex Classroom Intranet** 22

Originator
Sarah B. Nelson

Contributors

SuperSet Element(s)
The Brain

Related Elements
Cerebellum Project
Management Tool
Assessment Program
Immersions
Instill-ation
Design Methods
DesComm
Design Qualities
Strategem
Polyzign
Collaborator
Good Citizen
Policy Domain Knowledge
Policomm
Leadership

Sources
SeeID

Personal Experience

WebCT Campus Edition
http://www.webct.com/software/viewpage?name=software_virtual

SubSet Element(s)
Discussion Board
Materials Library
Submission Tool
Course Builder
Catalog Manager

Description

A web-based tool that facilitates materials sharing and supports classroom activities.

Properties

- A secure web-site, accessible from anywhere
- A course materials library
- An asynchronous discussion tool
- Ties into the Assessment Program
- A course administration tool
- A system for creating new courses and archiving old ones

Features

- Allows teachers to provide materials and assignments in one place
- Allows students to access necessary class materials from anywhere
- Provides a public forum for the teacher and students to discuss issues outside of class time
- Ensures students know how they are progressing

Version: 2 Date: Nov. 15, 2005 Date of Original: Nov. 27, 2005

System Element	EMS	Cortex Classroom Intranet	22

Fulfilled Functions

F42. Archive information
F43. Share resources
F46. Collaborate
F47. Present materials
F93. Develop record-keeping system
F94. Manage academic resources
F95. Manage technology resources
F96. Coordinate satellites
F101. Provide student support
F109. Support faculty

Design Factors

Difficult to Coordinate
No way to manage large amounts of data
People may not contribute information
Users may be in different locations
Materials are in different formats
Resources not consolidated
Lack of student interest and participation
Distance can be a communication barrier
Difficult to develop evaluation criteria

Discussion

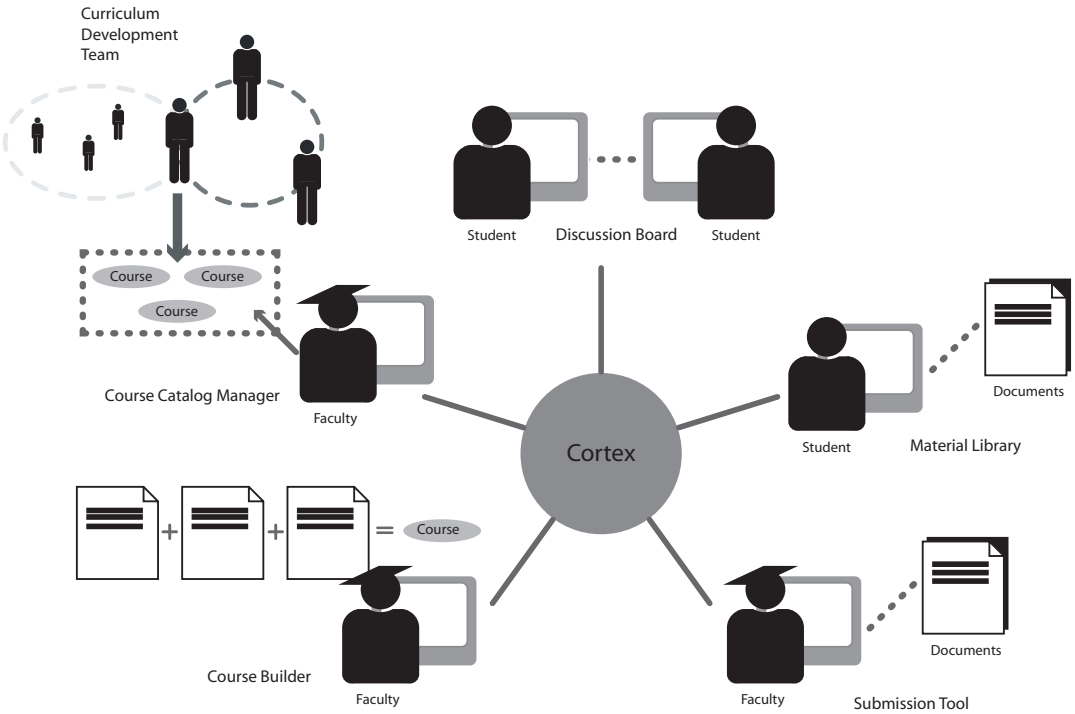
Over the last decade there have been significant changes to the traditional classroom. Internet technologies have helped extend the learning process beyond the classroom's four walls. Asynchronous discussions mean students can ask faculty questions after class and faculty can post those answers for the rest of the class to see. In addition, these tools can encourage students to look to each other for answers. The benefits of classroom intranets are so significant that they have become a fixture of most classrooms regardless of education level.

The Cortex takes the basic classroom intranet model and customizes it for the EPDS. With a **Discussion Board**, a **Materials Library**, and the ability to submit and receive assignments through a **Submission Tool**, the **Cortex** is an important classroom support tool.

The Cortex is accessed through The Brain. Each student has a page of **Cortex** classes called "My Classes" that allows them quick access. Professors also have a list of their classes but they also have the ability to create courses and edit the content on an ongoing basis using the **Course Builder**.

Discussion Board

The **Discussion Board** enables asynchronous discussions to happen outside of class. Both students and faculty members can create a discussion topic and post questions or comments. Class members can sign up to be notified via e-mail when new posts are made.



Version: 1 Date: Nov. 15, 2005 Date of Original: Nov. 15, 2005

Discussion con't

Materials Library

Course materials are made available to the class by the professor. Materials can be posted to the **Materials Library** in multiple formats. For items needing copyright protection or outside fair use, a check-in and check-out system will allow a limited number of copies to be available at any one time.

Submission Tool

The **Submission Tool** allows students to submit assignments and helps faculty track submissions.

Course Builder

The **Course Builder** is used by faculty members to set up and administer their **Cortex** course. Faculty can select rules for establishing the **Discussion Board** and **Materials Library**.

Catalog Manager

The **Catalog Manager** is a web-based tool for providing faculty access to developing new courses and for archiving old ones. It can be used by the **Content Expert** or **Administrator** members of the **Curriculum Development Team** to review old courses.

System Element	EMS	Governance	23

Originator
Yanin Kasemkosolsri

Contributors
Sarah Nelson
Steve Babitch

Sources
Team Deliberations

SuperSet Element(s)

SubSet Element(s)
Retention System
Incentive
Scanning Role

Related Elements
Recruitment System
Assessment Program
Alterna Calendar
Curriculum Development Team
Contact Database
Partner Net

Description

The system to structure the philosophy of the school, collaborate work among different departments and people such as faculty, students, and staff.

Properties

- Database system
- The structure of operating and managing system
- Infrastructure system
- Hierarchy operating structure

Features

- Collect faculty and staff information
- Manage and operate the school / program
- Plan short and long term goals and strategies
- Contact people among organization
- Provide information for adapting, improving, and managing the program
- Get feedback from faculty, staff, and students to improve working system
- Coordinate partnerships with organizations, governments
- Promote school program
- Improve the facilities for faculty, staff, and students
- Create good working environment for the program

Version: 3 Date: 1 December, 2005 Date of Original: 29 November, 2005

System Element	EMS	Governance	23

Fulfilled Functions

F7. Evaluate learning
F9. Track progress
F44. Assess quality
F45. Perform research
F48. Assess needs
F56. Measure success
F61. Recognize achievement
F68. Evaluate candidates
F88. Document influence
F98. Develop application process
F99. Recruit students
F100. Accept students
F101. Provide student support
F107. Evaluate alumni success
F108. Recruit faculty
F110. Evaluate faculty

Design Factors

Difficult to coordinate
Unable to track progress
Quality is difficult to access
Users may be in different locations
Difficult to uncover needs
Success is difficult to measure
Difficult to assess diverse backgrounds through standardized process
Difficult to assess soft skills
Unable to target appropriate audience
Insufficient applicant pool

Discussion

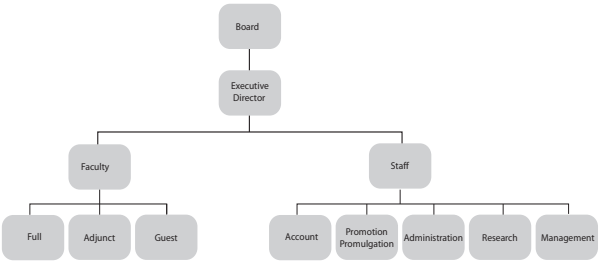
One of the most important structures of Education for Policy Design Synthesis program is how to structure the organization's administration in order for faculty and staff to coordinate effectively with each other. To accomplish the goal, the structure of the governance has to be planned thoughtfully in the direction of great success.

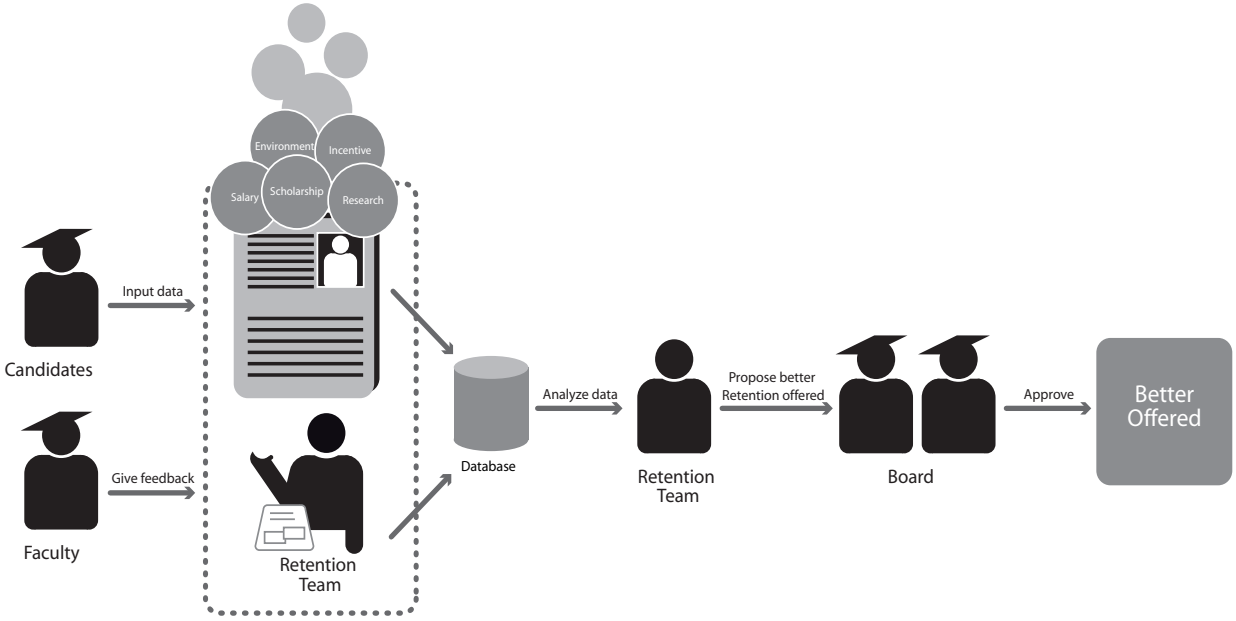
Governance is a comprehensive designed system to help structure and manage the organization of the program, staff, faculty, and students. The philosophy of the school is that collaboration works among different departments and people (faculty, students, and staff).

Retention System is the software tool that evaluates how the program is performing. Comprised of the **Retention Checklist** and **Retention Feedback**, it will measure faculty, staff, and student satisfaction and gather in what areas are doing well and what areas need improvement.

Incentive is an evaluation system that ensures employees of the program are satisfied with their jobs. It is designed to attract and retain faculty and staff and provide motivation for being at EPDS.

Scanning Role is the person who has to update and gather all trend information and sources of new knowledge. They must also compile all data and analyze them to improve the system to be organized more effectively.





System Element	EMS	My Voice	24

Originator
Sarah B. Nelson

Contributors

SuperSet Element(s)

Related Elements
Thalamus Communication Tool
Strategy Consensus
Curriculum Development Team
Interplay
Governance

Sources
Personal Experience
Existing blog technologies

SubSet Element(s)
MyVoice BBS
MyVoice Forum
MyVoice Kiosk

Description

A multi-modal feedback system that allows students, staff, or others to participate in and comment on important decisions.

Properties

- A web-based discussion system
- A public meeting
- A forum for questions and answers
- A web-based bulletin board where plans and announcements can be posted
- A electronic kiosk bulletin-board where plans and announcements can be posted

Features

- Allows various parties to contribute their feedback to important decisions
- A way for decision makers to gain alternative viewpoints
- Structures and organizes feedback
- Captures ongoing discussions
- Provides a place for decision makers to post plans
- Builds a trusting, inclusive community

Version: 1 Date: Nov. 15, 2005 Date of Original: Nov. 15, 2005

System Element	EMS	My Voice	24

Fulfilled Functions

F6. Develop Curriculum
F7. Evaluate Learning
F9. Track Progress
F45. Perform research
F46. Collaborate
F47. Present materials
F48. Assess needs
F49. Scan environment
F50. Establish priorities
F51. Seek input
F56. Measure success
F87. Learn from influence
F107. Evaluate alumni success
F110. Evaluate faculty

Design Factors

People resist change
Success is difficult to measure
Implementation path unclear

Discussion

As the EPDS program grows, the program will need to adapt its processes, curriculum , and strategy to changing design and policy trends. However, change is often a de-stabilizing force in a community and implementation should be handled with care. An inclusive, healthy community provides formal and informal outlets for ideas to be discussed and concerns to be voiced.

MyVoice is system of electronic and face-to-face forums that allow community members to have input in the growth and change of their community. Elements of the system can be used independently or together, depending on the size of the change and the expected desire for input.

For example, the Curriculum Development Team may be designing a new set of courses that teach structured planning in for healthcare policy development. The Curriculum Development Team may have received this directive from Strategy Adaptation. Course concepts have been developed using the Polyzign. Prior to scheduling and including these new courses into the course catalog, the Team may be interested in testing the concepts amongst potential course students. In addition to using Idea Iteration, they may also set up a MyVoice Forum and invite specific students they know have an interest in healthcare. They may also post an open invitation on the MyVoice Kiosk or open a discussion for the whole community on the MyVoice BBS.

The MyVoice system may also be used to discuss other items of community interest in addition to curriculum adaptation. Examples may include items in the vending machine, a student social events initiative, the hiring of a new executive director, parking problems, or development of the AlumniNetwork. Participants can include students, administrators, staff, faculty, alumni, partners, board members, or invited guests.

MyVoice BBS

MyVoice BBS is a web-based bulletin board system that provides an asynchronous forum for the public discussion of program addition. Like most web-based discussion forums, someone posts a topic for discussion and invites members of the community to participate. The MyVoice BBS system is differentiated from traditional models in that the initiative lead can either allow feedback from the entire community or from selected participants.

Process The initiative lead creates a new discussion on MyVoice BBS and invites participants. For private discussion, invited participants receive and e-mail with a link to the MyVoice BBS forum. They follow this link, read the initial question and can post responses, thoughts, or questions. Theses responses are visible to other members of the forum and can in turn be responded to in a threaded discussion.

For public discussions, the initiative lead can invite participants by posting a notification to both the MyVoice Kiosk and an announcements area of Thalamus.

MyVoice Kiosk

MyVoice Kiosk uses **The Brain's Thalamus Kiosk** to display announcements of current MyVoice BBS public discussions or invites participants to attend a **MyVoice Forum**. **Community** members can approach the kiosk, read announcements and post comments to the **MyVoice BBS**.

MyVoice Forum

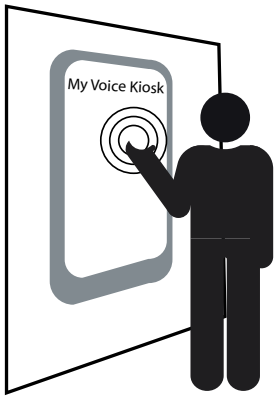
MyVoice Forum is a face-to-face forum for the discussion of new ideas. In a **MyVoice Forum**, the initiative lead opens, presenting her concept and rationale to the group. A question and answer session follows this presentation.

A **MyVoice Forum** can be set-up on **Thalamus**. When setting up a forum, the initiative lead can choose to make this forum public or private. When a public forum is set-up,

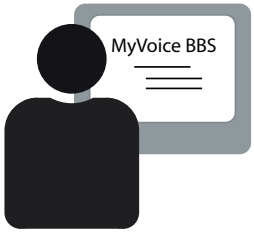
System Element	My Voice	24

Discussion con't

an announcement is posted to **MyVoice Kiosk**, **Thalamus**, and an e-mail is sent to the whole community. When a private forum is established, e-mail invitations can be sent to participants and their RSVPs monitored.



MyVoice Kiosk



MyVoice BBS

MyVoice Forum

System Element	EMS	Curriculum Development Team	25

Originator
Sarah B. Nelson

Contributors

SuperSet Element(s)
Curriculum Guidelines

Related Elements
Strategy Consensus
Polyzign
Assessment Program
Cortex Classroom Intranet
MyVoice

Sources
Personal Experience

Interview with Prof. Gary Nelson on Oberlin College course design methodology.

SubSet Element(s)
Core Team
Course Designers

Description

A team that oversees course selection, design, scheduling, and implementation.

Properties

A team
A content expert role (a faculty member)
An administrator role
An advisor role
A collection of education and content experts
A tool for planning the course schedule, assigning resources, and faculty

Features

Helps team evaluate directives
Balances directives
Plans and schedules the course catalog
Facilitates the design of courses
Designs courses that support the strategy of the schools
Weighs input from various sources to identify and fill needs

Version: 2 | Date: Nov. 15, 2005 | Date of Original: Nov. 27, 2005

System Element	EMS	Curriculum Development Team	25

Fulfilled Functions

F2. Assign faculty
F3. Design Course
F4. Approve Course
F5. Gather Materials
F6. Develop Curriculum
F7. Evaluate Learning
F8. Plan Schedule
F9. Track Progress

Design Factors

No means to Assess Course is Best-Suited for Programs
Faculty is Hard to Find
Unable to Define the Detail of Courses
Difficult to Compile All Courses
Sufficient materials do not exist
The schedules are not flexible
No Means to Evaluate Learning
Difficult to Coordinate

Discussion

The Curriculum Development Team oversees curriculum guidelines, requirements, and course structure. **The Team** also oversees course selection, design, scheduling, and implementation. **The Curriculum Development Team** structures the course catalog based on input from research, assessment, and adaptation processes like **MyVoice**, the **Assessment Program**, and **Strategy Adaptation**.

The Core Team

The Core Team is made up of a **Content Expert**, an **Administrator**, and an **Advisor**. **The Core Team** evaluates and balances directives, plans and schedules the course catalog, and facilitates the design of those courses.

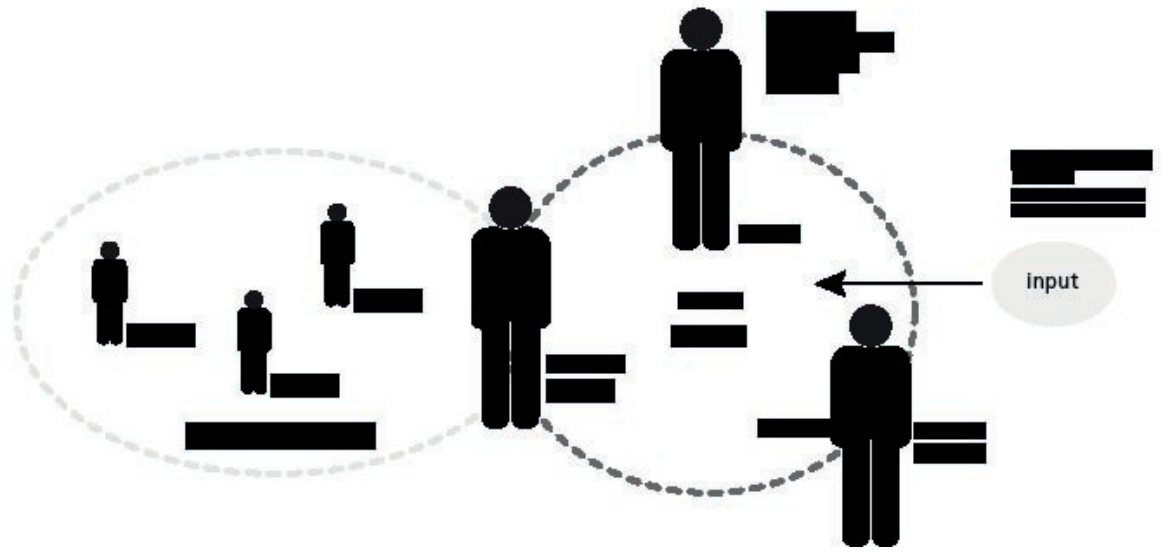
The Content Expert **The Content Expert** is a senior member of the faculty, charged with the educational content of the program. **The Content Expert** works with the **Core Team** to determine high-level objectives and identify scheduling problems. **The Content Expert** assigns faculty to courses and advises **Course Designers** on the development of syllabi and course content. **The Content Expert** must approve the cou
for t

The Administrator **The Administrator** schedules courses and coordinates resources including rooms, faculty, and media carts. The Administrator identifies possible conflicts for the Content Expert and Advisor to resolve.

The Advisor **The Advisor** looks at both institutional and financial capabilities, providing guidelines where necessary. Possibly a **Board** member or **Executive Director**, the **Advisor** keeps the program's strategy in mind. Though the **Advisor** does not have direct input into course content, the **Advisor** can raise issues and point out conflicts between offerings and strategy.

Course Designers

Course Designers are assigned courses to develop by the **Content Expert**. **Course Designers** are members of the faculty and design the course they will teach at a syllabi and day-to-day level. **Course Designers** can propose new courses to the **Content Expert** who will take these proposals to the **Core Team**.



Version: 2 Date: Nov. 15, 2005 Date of Original: Nov. 27, 2005

System Element	EMS	Implementation Protocol	26

Originator	SuperSet Element(s)	Related Elements
Enric Gili Fort		
Contributors		
Steven Babitch		
Sources	**SubSet Element(s)**	
"Winning decisions" J.Edward Russo and Paul J. H. Schoemaker, 2002. Team Deliberations		

Description

The implementation protocol is a process to implement program strategies for the future, prioritize them, match them with resources.

Properties

- A protocol
- An assessment method
- A document summarizing a road map for change
- A group of planners, faculty, researchers, administrative staff and public relations people

Features

- Transforms a declaration of intentions into a workable road map for the program.
- Sets the priorities and establishes how the changes will be implemented
- Aims to be used as a guide for all aspects of the program
- Appoints people to be responsible for each step
- Places the changes along timeline

Version: 3 Date: December 4, 2005 Date of Original: November 16, 2005

System Element	EMS	Implementation Protocol	26

Fulfilled Functions

F46. Collaborate
F50. Establish priorities
F53. Make decision
F55. Implement changes

Associated design factors

It is difficult to keep track of goals
Implementation path unclear
People resist change
There may be unforeseen problems
Success is difficult to measure

Discussion

Managers have strong ideas and beliefs about how to manage the institution. But rarely are these ideas and intentions communicated to the rest of the community, nor are they documented or planned in a concise and precise way such that the community has access to it. This prevents the community from being able to work collectively towards the same goals.

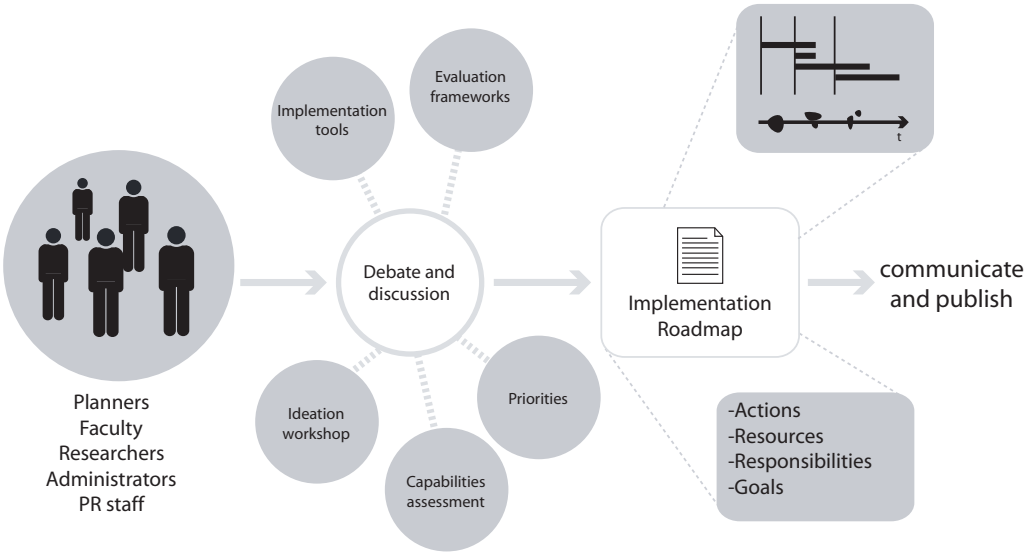
Implementation Protocol

To address the problem of isolated planning and lack of communication, the **Implementation Protocol** seeks to establish a framework and tools to facilitate the evaluation of both human and material resources, the prioritization of goals, and the planning of its arrangement over time.

The initial action is to gather a diverse group of people from within the educational program that will have competencies affected by the implementation of the strategy and that represent every department involved in the execution: planners, faculty, researchers, administrators and public relations. This diversity of expertise and approaches is very much needed in order to address the plan in a more practical and realistic way and with higher chances to be complied by everybody.

Once the implementation group is formed, the overall program's **Declaration of Intentions** is taken as the basis for the following discussions. Taking the format of a workshop and taking the process as a collective ideation, the group follows an iterative series of prototyping, evaluation and reformulation considering the most important aspects of the implementation:

- Description of the actions needed to accomplish the overall goals.
- Evaluation of the actions and assessment of priority level for each action
- Assessment of present capabilities
- Considering possibilities given present expertise
- Assessment of resources



Version: 3 Date: December 4, 2005 Date of Original: November 16, 2005

Discussion con't

In order to describe and communicate how to apply these actions over time, prototyping and visualization tools are provided to plot the implementation:
• PERT chart and similar techniques to display dependencies between actions and plot them along the time line as they are used in project management projects.
• Evaluation Frameworks which weight the criteria

Strategic Roadmap

The collection of documents describing the implementation plan will be compiled in the "strategic road map".
This set of documents describes the following points:
• A time based implementation map, describing all the dependencies between actions and how they will be executed
• Assignment of responsibilities and goals for each action to the appropriate departments
• Specifies the allocation of resources for each stage and, if needed, suggests the action for extra funding to accomplish certain actions

The **Strategic roadmap** is to be used as shared guideline across departments within the institution and will be used as a reference point for all the actions that affect the strategy of the program. Its publishing and release to the community ensures the coordination of efforts and reinforces identity of the program.

System Element	EMS	Strategy Consensus	27

Originator	SuperSet Element(s)	Related Elements
Enric Gili Fort		
Contributors		
Steven Babitch		
Sources	**SubSet Element(s)**	

Description

Strategy consensus is a discussion process that helps the community to streamline the overall strategy lines that would influence the decisions and actions of the institutions.

Properties

- A discussion protocol
- An open dialogue event
- A presentation of the proposed changes
- An evaluation system
- A consensus facilitator
- A fair and equal decision making environment
- A voting system (different voting weights)
- A community shared declaration of intentions (similar to a charter)
- A feedback collector system

Features

- Guides the process of streamlining the educational program strategy
- Facilitates consensus among faculty, board, students and community
- Enables a balanced distribution of decision power among the community
- Makes agreements concrete and makes everybody agree about the direction of the program based on real findings
- Establishes the overall strategy for the long term

Version: 3 Date: December 4, 2005 Date of Original: November 16, 2005

System Element	EMS	Strategy Consensus	27

Fulfilled Functions

F50. Establish priorities
F51. Seek input
F54. Specify changes
F58. Coordinate with campaign program
F97. Design internal environment

Associated design factors

Priorities are unclear
People may not participate
Ideas may be unsuccessful
Decisions are not made alone
Options are difficult to assess

Discussion

A common problem in educational institutions is the lack of alignment between parties e.g., the board of directors, faculty, alumni, students) in the way they each consider future opportunities. The consequences of these differences results in uneven support for initiatives within the program, which leads to a lack of focus of the program.

Strategy Consensus

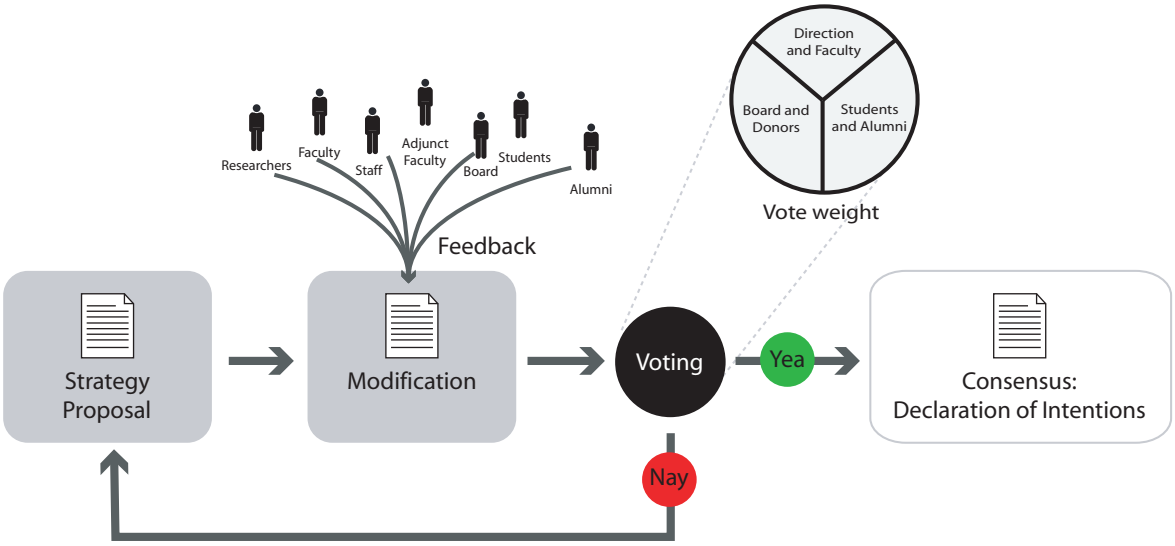
Strategy Consensus seeks to establish an open framework and process to allow all voices within the community to be heard and to be part of the decision process that will define and redirect future strategies of the institution and reflect it in a collective **Declaration of Intentions** upon which everybody will refer its future work to.

The first step is done immediately after the **Trendspotting** process is finished and after the direction of the educational program considers that the strategies of the program have to be tweaked or redirected according to the **Forecasting scenario** described by the **Panel of Experts**.

This document, created by a neutral group of experts, serves as a basis for the direction of the **Declaration of Intentions**. The final version of this document is to be used internally and describes the overall strategies that the program aims to follow, independently of who is in charge or who is directing the institution, aiming to work as a common ground across bodies of governance through the years to provide more stability.

MyVoice

The first sketch of the "Declaration" is published and posted to be reviewed by all layers inside the institution. As a way to provide feedback the process will use **MyVoice**, a multi-modal feedback system that allows different tiers of the community (students, staff or others) to express their agreements and disagreements with the presented document. MyVoice enables web-based discussion, virtual public meeting capabilities and capture of feedback.



Version: 3 Date: December 4, 2005 Date of Original: November 16, 2005

Discussion con't

This will provide enough input for later examination and consideration by the parties responsible for making the process succeed.

Once the feedback process is completed, the parties responsible for crafting the **Declaration of Intentions** goes back to the input received, and objectively tweaks and reviews the declaration in order to submit it for approval through a voting procedure by all members of the community. Everybody in the community has had the chance to express their opinion as this has been reflected in the second version of the document.

At the time of voting, everybody has the right to vote, however, to ensure a more balanced distribution of decision power according to experience and rank, the votes will weight differently. For example, the dean or director of the school and faculty might account for a third of the votes, students and alumni for another third and the rest of the community such as the board of directors and donors the last third. By doing this no single tier will have full control over the decisions and they will always need at least a big part of the other tiers to pass. Again, proportions of vote weight are an approximation of how a fair democratic system could work, but is recommended that when put it into practice, an evaluation of its results are checked to ensure all tiers' powers are in balance.

Depending on the outcome of the voting results two different scenarios lay ahead. If the document is approved, it is a sign that the majority agrees on the proposed, and it reflects that everybody is on the same page. This will hopefully ensure a regular and steady direction in which everybody will feel comfortable with and agree on working towards the same goals.

If the voting process denies the document, the parties in charge of the **Declaration of Intentions** have to take responsibility of its rejection and enter a reflection process to understand the reasons for the refusal. This should lead to a new rewriting of the document and the community should build consensus in order to reach agreement.

System Element	EMS	TrendSpotting	28

Originator
Enric Gili Fort

Contributors
Steven Babitch

SuperSet Element(s)

Related Elements
Cerebellum project management tool
Future Vignette

Sources

SubSet Element(s)
Policy Gurus
TrendWatch

Description

Trendspotting is a research process which objective is to collect the most relevant trends of thinking and action in the policy making domain.

Properties

- A process to recruit experts
- A human organization that is very knowledgeable about the policy making environment
- A content management system that captures the new knowledge generated
- A data/information crunching protocol
- A set of tools to envision new ideas
- A set of communication tools to allow group members to share information
- A synthesized document that distills the findings and trends

Features

- Identifies ideal candidate experts
- Puts together to work a human team with high expertise
- Provides communication and idea generation tools
- Analyzes critically and systematically research data based on guidelines and priorities.
- Collects the insights and new data

Version: 3 Date: 2004 Date of Original: 2004

System Element	EMS	TrendSpotting	28

Fulfilled Functions

F5. Gather materials
F43. Share resources
F45. Perform research
F46. Collaborate
F47. Present materials
F49. Scan environment
F51. Seek input
F52. Generate ideas

Associated design factors

No way to manage large amounts of data
Quality is difficult to access
Users may be in different locations
Materials are in different formats
Trends are difficult to identify
Scanning is often informal
Information quality is difficult to assess
Ideas may be unsuccessful
Decisions are not made alone

Discussion

With the aim of being a leading institution in the field, the Educational Program for Policy Design Synthesis not only has to be aware of the current status of the profession domain but also has to look ahead and plan its educational efforts and institutional strategies according to future developments within the policy making environment.

Trendspotting

Trendspotting is a process which defines the actions and resources required to identify the most relevant trends, which involves a combination of experts, procedures, information tools, frameworks and documents.

In order to evaluate the newest trends, a group of academic and professional experts on the policy environment must be brought together. This task requires specific knowledge about who is who in the world of policy making and also requires an objective assessment of capabilities of each individual considered.

Policy Gurus

Policy Gurus is a human team based within the educational program whose task is to be an active participant in the policy making theoretical field, participating in events, collecting information from publications and making this knowledge available to the educational community.

The main value it brings to the **Trendspotting** process is the capability of identifying who the experts and leading professionals are in the field that could serve the program with their forecasting knowledge and work on crafting the future trends analysis.

Panel of experts

The outcome of this selection process is a **Panel of Experts** that has been put together balancing the most theoretical knowledge that comes from research and academia - faculty members are obvious candidates here - with the most practical knowledge that comes from the everyday practice of policy making.

The nature of the **Panel of Experts** is to be a varied group of people with different backgrounds, disciplines and expertise. The model allows them to work in a group as a think tank, allowing discussion, fluid exchange of ideas, and setting up of the right environment in which a wide array of opinions and perspectives can be suggested and evaluated.

The main goal, by means of their up-to-date knowledge, is about the present situation in policy and their intuition about its future progression, to distill the fields of knowledge that will have a greater relevance in the future of policy, paying special attention to the ones that may affect the practice of design thinking, both directly or indirectly, in the policy environment.

Trendwatch

As a knowledge base that holds and delivers all this knowledge and makes it accessible, Trendwatch is a database that enables faculty and researchers to both access and store data related to knowledge generated in the field. This might include news articles, notes from a conference, television show recordings, findings from research studies, both internal and external, and other forms of information.

To support the process of idea generation and knowledge transformation, a range of tools and methods will be provided to the **Panel of Experts**.

Concerning the idea generation tools, several techniques and methods are available in order to facilitate the generation, capturing and tracking of ideas:

-**Future Vignette** will help experts ideate and visualize future complex systems scenarios based on pieces of knowledge and using creativity and iterative process to envision the rest of the picture.

-The **Cerebellum project management tools** available for internal use within the institution are especially ideal to

Discussion con't

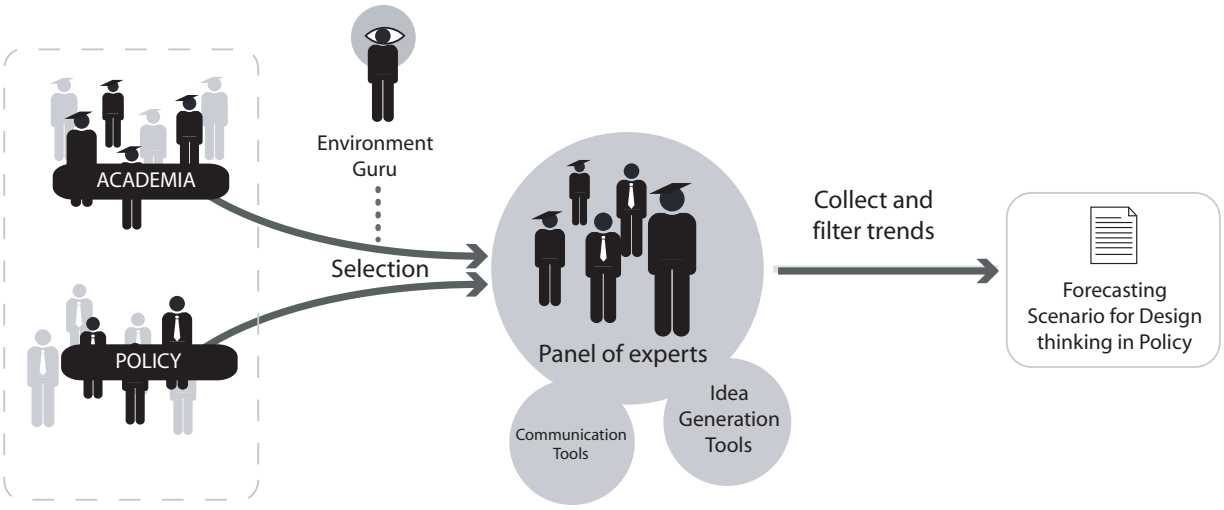
support content management related tasks. Among all its features there are several worth highlighting: **GroupThought** enables collaborative writing and saving thoughts in a centralized way, **BlogChat** is an asynchronous discussion tool to maintain conversations after meetings are over, and **Gabber** is a synchronous chat-like tool that allows members to communicate with each other.

This 'live' working and documenting allows keeping track of the overall process and avoids losing ideas that may potentially generate new ones.

Forecasting Scenario

The high value of the ideas and knowledge generated in this collective process requires it to be captured in order to allow the community to benefit from it. This takes the shape of a "Forecasting Scenario," a document that describes a future scenario in the policy environment and how design thinking could fit, how it can affect it, and how it could work within its frame. This document will be used as a starting point for discussing future strategies for the educational program which is described in **Strategy Consensus**.

The "trendspotting" process is planned to be executed in a regular basis in order to enable a more progressive adaptation to the ongoing events and that will affect the way design thinking education develops.



System Element	EMS	Assessment Program	29

Originator
Yanin Kasemkosolsri

Contributors
Sarah Nelson
Steve Babitch
Christine Kim

Sources
Team Deliberations

SuperSet Element(s)

SubSet Element(s)
Assessment Tool
Report

Related Elements
Trend Watch
Comparative Analysis
My Voice
Recruitment System

Description

The assessment system used to identify and collect the evaluation tools, identify and collect all assessment data from students, faculty, staff, and the EPDS program, and analyze the progress periodically.

Properties

- The database containing the evaluation process
- The electronic source to provide evaluation tool
- Method to evaluate students, faculty, and system
- Record of evaluation from past and present
- Questionnaires
- Evaluation Forms
- Evaluation Tests

Features

- Gathers all evaluation tools for the program
- Plans and implements the evaluation tools
- Determines and records data from the past and present
- Monitors the progress of students, faculty, and program
- Reviews the curriculum
- Gathers input from students and faculty on course success
- Analyzes all input data, compares each period, compares students with others, students with other institution's students

Version: 3 Date: 4 December, 2005 Date of Original: 17 November 2005

System Element	EMS	Assessment Program	29

Fulfilled Functions

F7. Evaluate learning
F9. Track Progress
F44. Assess quality
F45. Perform research
F48. Assess needs
F56. Measure success
F61. Recognize achievement
F68. Evaluate candidates
F88. Document influence
F98. Develop application process
F101. Provide student support
F110. Evaluate faculty

Design Factors

No means to evaluate learning
Unable to track progress
Quality is difficult to access
Users may be in different locations
It is difficult to uncover needs
People resist change
Success is difficult to measure
Difficult to find candidate
Uncertain which knowledge is valuable
No means to decide best way to register
Difficult to assess diverse backgrounds through standardized process
Difficult to develop evaluation criteria

Discussion

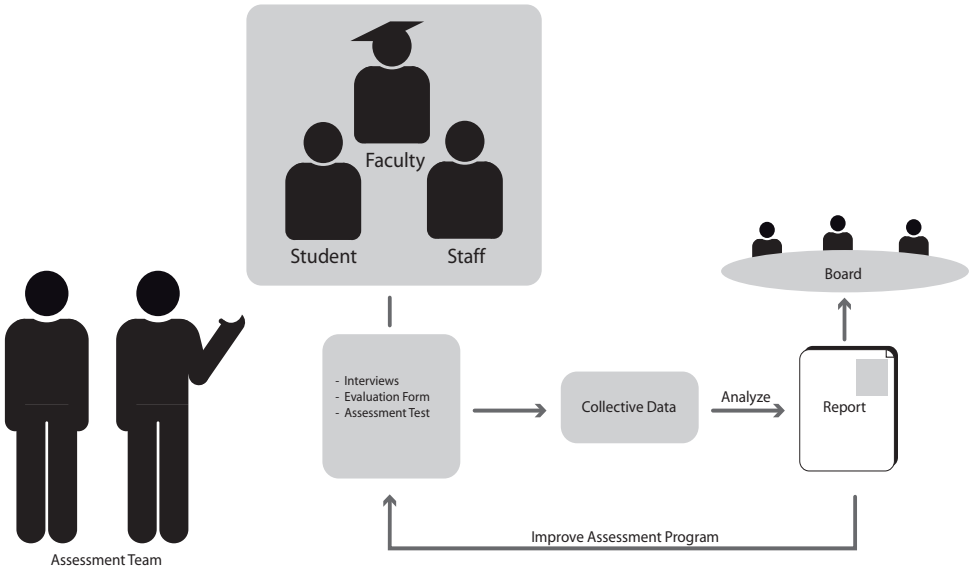
Assessment Program is a tool that focuses on how to improve the quality of program. One way that assists the development of the program is an approach that assesses students, faculty, staff and the curriculum.

Assessment Program is a tool and process that helps to monitor the program among students, faculty, and staff in order to evaluate overall process and quality. Also, it is important data gathered for developing the program and people.

Assessment Program keeps a history of assessment related documents. It classifies what to focus on in each category and makes improvements in each specific field more effectively. It also contributes to the other parts of the program in terms of leveraging the program's quality. **Polyzign** can be aggregated information for the **Assessment Program** that can look at a particular course and the balance or appropriateness of the program.

Assessment Tool is an archive monitoring tool and method database used for evaluation. It contains evaluation forms, integrated-assessment activities and procedures for assessments. **Assessment tools** are applied for the purposes of evaluation of groups of people in the program. First, **Evaluation Test** will be used for assessing students' progress for final presentations, projects or writing examinations. **Evaluation Forms** are then filled out to evaluate students, instructors, and the course itself. Clusters of evaluation information are then used to analyze and assess the program. Moreover, the analysis result will be used to improve the next course in terms of revising the course structure, means of learning, or even the content of the course in the **Report**.

Report is the software program used for keeping assessment records and analysis information. Faculty must write a Report record after completing a course. To fill out **Report**, the staff and faculty must gather all data and fill out the data in format form, and analyze the progress. In addition, faculty and staff must write and suggest what to improve for the next course. Staff members must write a **Report** about their co-workers in order to evaluate the work environment.



Version: 3 Date: 4 December, 2005 Date of Original: 17 November 2005

System Element	EMS	Promulagator	30

Originator
Yanin Kasemkosolsri

Contributors
Sarah Nelson
Steve Babitch
Christine Kim

Sources
Team Deliberations

SuperSet Element(s)

SubSet Element(s)
Beneficial Partnership Tool

Related Elements
Alumni Network
Communication Strategy Builder
Contact Tracker

Description

A set of systems to promulgate information about the program and build the reputation of the program through several media.

Properties

- A database to plan, manage, and implement promulgation program
- A team of people who work on continuous promulgation
- A tool to collect all datas and record of partnerships and success

Features

- Determines how to promulgate
- Creates plan of short and long term promulgation goals
- Implements the plan through campaign program
- Hosts events
- Qualifies and checks speakers
- Determines program schedule
- Evaluates progress

Version: 3 Date: 11 November, 2005 Date of Original: 21 November 2004

System Element	EMS	Promulgator	30

Fulfilled Functions

F7. Evaluate learning
F9. Track progress
F44. Assess quality
F45. Perform research
F48. Assess needs
F56. Measure success
F61. Recognize achievement
F68. Evaluate candidates
F88. Document influence
F98. Develop application process
F99. Recruit students
F100. Accept students
F101. Provide student support
F107. Evaluate alumni success
F108. Recruit faculty
F110. Evaluate faculty

Design Factors

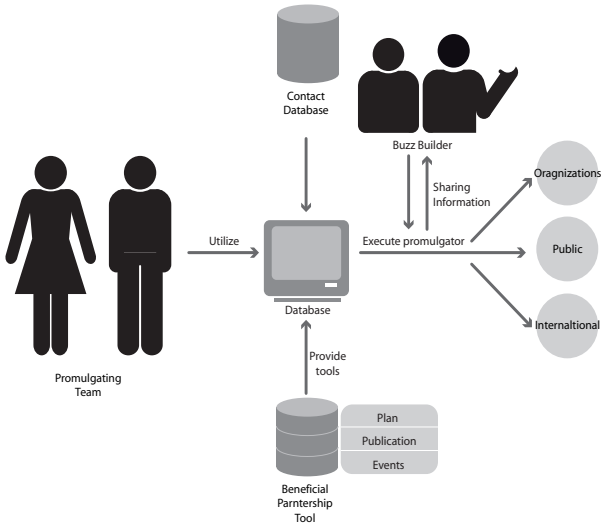
Difficult to coordinate
Unable to track progress
Quality is difficult to access
Users may be in different locations
Difficult to uncover needs
Success is difficult to measure
Difficult to assess diverse backgrounds through standardized process
Difficult to assess soft skills
Unable to target appropriate audience
Insufficient applicant pool

Discussion

After implementing the program to the public, Education for Policy Design Synthesis should make the official announcement of the program in order to promote the program's value and build prestige of the program worldwide. This activity is essential in terms of reflecting the program's progress. To grow prestige, the EPDS has to execute a campaign continuously and efficaciously. Coordination with the Campaign for Policy Design Synthesis can also increase awareness and prestige.

Promulgator is the toolset designed to help build the reputation of the program. Objectives of promulgation are both short and long term.

The **Promulgating Team** is a group of people working on a promulgation program from the beginning to the completion of a set of procedures. They have to be involved in sharing information and coordinating with **Buzz Builders** who work in or with the **Communication Strategy Builder Team**.



The **Promulgating Team** has to set the plan for both the short and long term to accomplish the promulgation process. To set the plan, the **Promulgating Team** has to identify contact lists, people from governments, partnership, and other institutions. The **Promulgating Team** can use the lists from **Contact Tracker**, that provides all contacts. To host events, the team members have to coordinate teams and provide place, manage the events and find a facility for guests. **Team Members** have to select channels of publication and distribution works for students and faculty. In addition, members have to evaluate the success of the team and events.

Promulgator provides tools called **Beneficial Partnership Tool**. Found in the **Promulgator** database, this software identifies how to build prestige through developing and maintaining strong relationships with partners. The software covers partnership building, planning timelines, managing promulgation program, hosting events such as conferences and exhibitions, and selecting publications of student and faculty work.

System Element	EMS	Contact Tracker	31

Originator
Yanin Kasemkosolsri

Contributors
Sarah Nelson
Steve Babitch

Sources
Team Deliberations

SuperSet Element(s)

SubSet Element(s)
Contact History
Contact Information Tracker

Related Elements
The Brain
Alumni Network
Beneficial partnerships tool
Promotion Blueprint
Communication Strategy Builder

Description

Contact tracker retains the record of useful media and press contacts. It is a system to keep records and categorize contact information. Thus it helps to reduce the work to keep up contact information, especially in the case of an EPDS employee leaving and new person to take responsibility.

Properties

- A web-based database
- A database to keep record of old contact history
- A database to keep record of current information, status, involvement
- A database of potential future contact lists

Features

- Keeps records of current and former contacts
- Records the current contacts: partnerships, organization, people, alumni
- List all the names of potential contacts

Version: 3 Date: 1 December, 2005 Date of Original: 15 November, 2005

System Element | EMS | Contact Tracker | 31

Fulfilled Functions

F66. Secure sponsors
F73. Host people
F74. Exchange people
F75. Host organization
F79. Establish relationships
F83. Measure influencing results
F84. Establish relations with top players
F85. Promote faculty
F86. Invite influencers to persuade
F87. Learn from influence
F102. Develop student activities
F103. Manage student exchanges
F106. Develop alumni network

Design Factors

No means to get attention
People don't speak the same language
Relationship accords not fulfilled
No means to identify who to influence
No means to define subject
Uncertain which knowledge is valuable
Inaccessible staff
Unable to contact alumni
Inadequate alumni participation

Discussion

Contact Tracker is a contact team helping to keep records of people and an information management system to record past and present contacts. This software prevents the loss of key information whenever the person who works in that role leaves. The software can be accessed via **The Brain**.

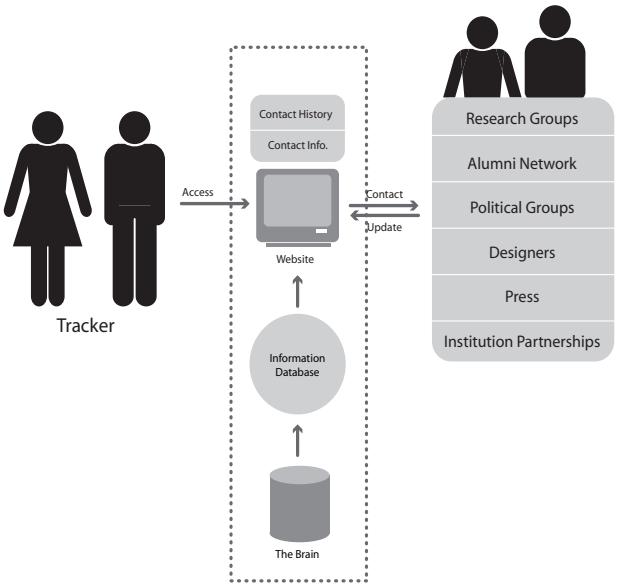
Contact History is the software database that records past history of each person in Contact Tracker, describing when they contacted the program, for what purpose, who was in charge of it, and includes former address and companies.

Another component is **Contact Information**. This software tool allows people to search for any address and organization relating to the EPDS program: current students, alumni, faculty, staff, business contact and emergency information. This software allows people to edit and update their personal information. They can select either to show their detail profile for public or keep only private. Also, they can send and receive mail by a software program called **Contact Mail**.

Students are able to search for alumni, current students, faculty, staff, and personal information and emergency contact information. Faculty are able to search in a business context, such as project partnerships and sponsored companies. Staff are able to search and edit all data in contact information and business contact detail sections.

The other component is **Tracker**, a team who works on keeping contact data, personal and business information of people who cooperate with the EPDS program.

In order to track personal information, **Tracker** can check each contact from the contact lists, they can send mail and request further information.



System Element	EMS	Liaisons	32

Originator	SuperSet Element(s)	Related Elements
Enric Gili Fort		
Contributors		
Steven Babitch		
Sources	**SubSet Element(s)**	

Description

Liaisons is a human element inside the program that serves as a link between external individuals and institutions and the program.

Properties

- A group of people with excellent interpersonal skills
- Has an understanding of both internal members and external players
- Knowledgeable about contact persons in policy-related organizations
- A team with combined expertise of public relations, project management and academic expertise

Features

- Facilitates the connection between inner community and organizations
- Considers best matches for working in interinstitutional projects (internal - external)
- Manages inter-institutional projects
- Evaluates relationships

Version: 3 Date: December 4, 2005 Date of Original: November 16, 2005

System Element	EMS	Liaisons	32

Fulfilled Functions

F67. Nominate candidates
F76. Define relationship purpose
F77. Find relationship candidate
F78. Choose ideal candidate
F80. Identify targets to influence
F84. Establish relationships with top players
F86. Invite influencers to persuade
F87. Learn from influence
F104. Help students plan career path
F105. Place students in inter

Associated design factors

Insufficient external contacts
Students' career goals not aligned with advisor's knowledge
Unable to target appropriate audience
Difficult to assess diverse backgrounds through standardized process
No means to identify top players
Unsure which is the most adequate approach
No means to decide how to influence
No means to identify who to influence
Uncertain to confirm quality of execution

Discussion

Liaisons

The state of relationships between the program and its partners is often attributed to the people who manage those relationships. A person or team must be designated or dedicated to ensure clear lines of communication and control of these relationships.

Liaisons is a human structure that seeks to ensure a smooth interconnection between the program and the external resources in a variety of collaboration formats.

Its main tasks are:

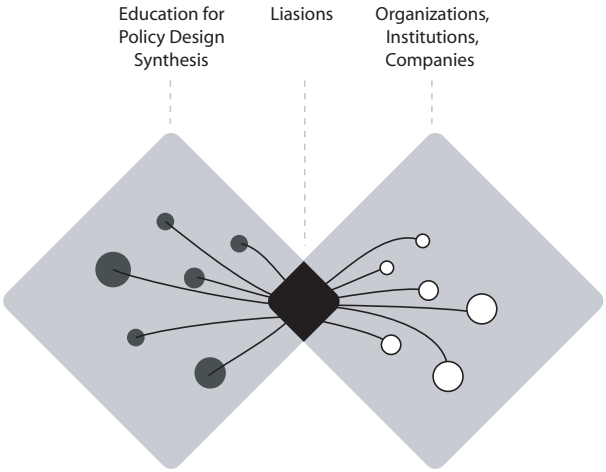
-*Professional matchmaking*. **Liasons** possess the knowledge and understand EPDS as well as an understanding of how potential partners can provide a mutually beneficial relationship. A capabilities assessment of both parties and the evaluation of ways of working results in better collaborations.

-*Relationship management*. Ensure the fluent communication and tracking of projects, keeping the project on track and ensuring the accomplishment of goals that were described on its constitution.

-*Communication facilitator*. Serve as a reliable point of contact between the program and partners.

-*Relationship evaluation*. **Liasons** serve as relationship evaluators relationships because they see them firsthand.

The characteristics of people working inside the "Liaisons" are high interpersonal skills, project management, and academic expertise.



Version: 3 Date: December 4, 2005 Date of Original: November 16, 2005

System Element	EMS	Communication Strategy Builder	33

Originator
Yanin Kasemkosolsri

Contributors
Sarah Nelson
Steve Babitch
Christine Kim

Sources
Team Deliberations

SuperSet Element(s)

SubSet Element(s)
Communication Protocol
Buzz Builder
Strategy Builder Tool
Allegro

Related Elements
Contact Tracker
Promulgator

Description

The strategy system to help to build media campaign program and promote the program to the public

Properties

- Database protocol
- Promotion tools
- Teamwork

Features

- Identify promotion tools to propaganda
- Plan short and long term goal of promotion program
- Schedule time to implement the campaign program
- Implement campaign program to public
- Evaluate the campaign success
- Record the history of campaign program

Version: 3 Date: 3 December, 2005 Date of Original: 22 November 2005

System Element	EMS	Communication Strategy Builder	33

Fulfilled Functions

- F66. Secure sponsors
- F73. Host people
- F74. Exchange people
- F75. Host organization
- F79. Establish relationships
- F81. Strategize how to influence
- F82. Exert influence
- F83. Measure influencing results
- F84. Establish relations with top players
- F85. Promote faculty
- F86. Invite influencers to persuade
- F87. Learn from influence
- F102. Develop student activities
- F103. Manage student exchanges
- F106. Develop alumni network

Design Factors

- No means to get attention
- It is difficult to choose topics
- People don't speak the same language
- Relationship accords not fulfilled
- No means to identify who to influence
- No means to decide how to influence
- No means to execute influence plan
- No means to identify top players
- Lack of interest by top players
- Subjects of interest not matching
- Unable to decide the most adequate way to influence
- Unable to attract audience's interest
- No means to define subject
- Uncertain which knowledge is valuable
- Inaccessible staff
- Lack of student interest and participation
- Unable to contact alumni
- Inadequate alumni participation

Discussion

EPDS should take the program to the public once all compelling features are established. It takes a lot of effort to be most effective in terms of introducing and communicating the EPDS program to the public and for students to grasp their first intent and impression. There should be a strategic communication plan for preparing, developing and managing the entire regime of promoting the system to ensure the program's success.

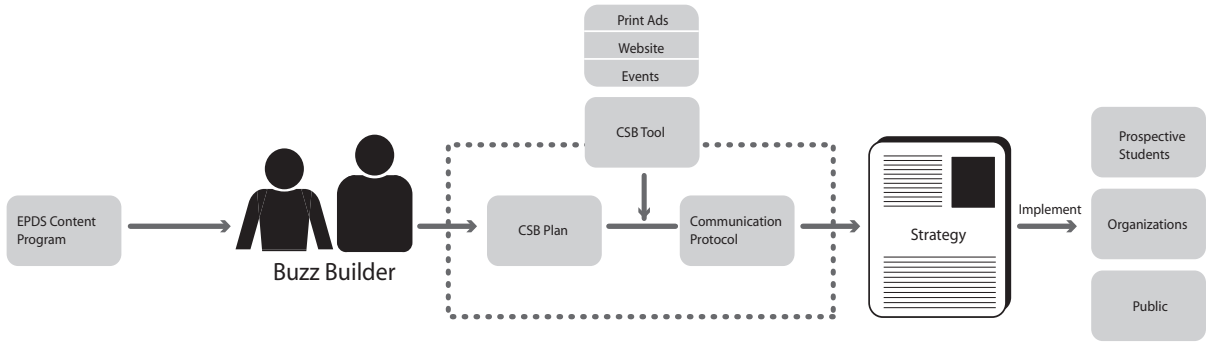
Communication Strategy Builder (CSB) is the system that helps to plan, implement and manage the communication system of program in order implement the initial program to the public. Also, **CSB** comprises of three components: **Communication Protocol, Timeline**, and **Buzz Builder**.

Communication Protocol is the communication platform for CSB to determine how to implement the communication campaign to the public. The protocol allows **Buzz Builder** to work with the protocol. The protocol will provide the plan from the introduction stage through the implementation stage.

Communication Protocol will guide what to do after creating compelling features in the planning steps. The protocol will provide a communication blueprint in order to promote the program to the public, and give instructions as to what **Buzz Builder** has to accomplish during the early stages, what promotion channels and material should be utilized, and what partnerships with government departments and organizations should be developed.

A timeline will be included in the **Communication Protocol Plan** in order to set short term and long term goals of the communication strategy.

Buzz Builder is a team of people who draw attention to the program by communicating messages to public and media. Also, **Buzz Builder** will utilize the **Strategy Builder Tool** for building reputation and spreading the messages about the program.



System Element	EMS	Polyzign Drinks	34

Originator
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Contributors

SuperSet Element(s)
Polyzign Network

Related Elements
Liasons
Contact Tracker
Alumni Network

Sources
Green Drinks (o2)
(foresightdesign.org/greendrinks)

Networking functions

SubSet Element(s)
Polyzign Online Resources
Polyzign Network

Description

A monthly networking and educational event for people interested in policy design that is open to students, alumni, professionals, and the public.

Properties

- Networking event for those looking for the policy and design communities.
- Repository of business cards for attendance tracking
- Bulletin e-mail service
- Information table for display of events, news, and brochures
- Informative panel discussion with experts from a variety of policy design related fields
- Open discussion of topics of interest
- Website with information about events and contacts

Features

- Enables socializing in an educational setting
- Facilitates resource locating and matching
- Shares information for upcoming events and news
- Promotes continued education regarding current issues in design and policy
- Creates a community for people in the field

Version: 3 Date: 4 December 2005 Date of Original: 18 November 2005

System Element	EMS	Polyzign Drinks	34

Fulfilled Functions

F78. Host events (Hosting)
F80. Host people (Hosting)
F84. Discover (Building Relationships)
F86. Establish (Building Relationships)
F87. Manage (Building Relationships)
F89. Form relationships (Exporting Influence)

Design Factors

No means to evaluate success
It is difficult to choose topics
No means to capture knowledge of event

Discussion

Polyzign Drinks is a forum for designers, policy makers, and other related professions such as students, alumni, and faculty to get together every month at a venue, such as a restaurant or bar, to socialize, network with professionals in their field, and learn about the current events of the policy and design community. Organized by student volunteers in the **EPDS Program** who belong to the **Polyzign Network**, these outings would occur during the week or after work hours so that professionals and students can both attend.

The cost of **Polyzign Network** events would be nominal to help pay for the space and some of the food. A brief cocktail hour and snacks would be followed by a short presentation or panel discussion regarding a topic of interest or in the recent news. Experts can be invited to participate in these panel discussions. Members of this group have access to resources and connections within the **Polyzign Network** to ask questions or pose interesting working topics that could continue on a forum online at **Polyzign Online Resource**.

An information table at the event may include a calendar of future events, white papers on interesting new topics, a newsletter, a sign up sheet for new members, as well as brochures from members' organizations. An e-mail listserv and a website would be the primary communication tools to inform members of upcoming events and news, which are pulled from the **Contact Tracker** and **Alumni Network**. The website would be kept up to date to inform people of upcoming events, store an archive of previous discussions and presentations, and provide a forum for questions and feedback. Since the organization is made up of mostly volunteers, funding raising would be required and may include sources such as sponsorships, advertisements, and donations.

Before and after the event's presentation or panel discussion, there will be an opportunity for people to network and make new contacts with people in their fields. Lively discussion and interaction with people that share the same interests build relationships that increase learning and understanding among those in this industry. Contacts made during these events can lead to future collaboration opportunities or potential new business. Extending the network of contacts beyond those who work in policy design can help those outside the community learn more about the field. Anyone from the public can attend **Polyzign Drinks** if they are interested in the topics discussed. Those not in the policy design field may learn new things from the **Polyzign Drinks** that they may be interested in incorporating it into their work.

Polyzign Online Resource

Polyzign Online Resource is a website that contains event listings, contacts within the **Polyzign Network**, recap of events, discussion areas, and articles and information on current issues related to policy design.

Scenario Michelle had just moved to Chicago to take a position with a startup design consulting firm that focuses on providing its services to the public sector. She was somewhat nervous about taking this job because it was far from her family and friends, and she did not know anyone in the city. After one month at the new job, Michelle was exhausted. She knew that working for a startup would be hard, but she did not realize that a startup in the field of policy design would be exponentially more difficult.

One day, Craig, a coworker, forwarded her an e-mail regarding an event being held the following evening at a neighborhood pub right around the corner from her office. Craig was a graduate of this new policy design program in Chicago. The e-mail he forwarded was from the school's alumni office. The event, **Polyzign Drinks**, was a monthly get-together for people interested in design and policy. There was a panel discussion planned for tomorrow night with a few professionals talking about design and education policy, something that was related to a project that Michelle was working on right now. Michelle decided to stop by the next night.

After work, Michelle and Craig walked over to the bar for **Polyzign Drinks**. They walked in around 6pm and met Tom, the organizer of **Polyzign Drinks**. He introduced

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himself to Michelle, put her business card in the business contact box, and had her fill out a form with her e-mail and contact information so that she could be contacted directly about future **Polyzign Drinks** and other events. While, Michelle and Craig grabbed a beer and some snacks, they met Mark and Brian. Mark was a designer who worked for a sustainable product design company. Brian was a policy consultant working for the City of Chicago. They were talking about the city's new recycling program.

At 7pm, the panel discussion began. On the panel was an executive from a well-known design policy consultant firm in Washington DC, a professor from the design policy firm, and the superintendent of schools for Chicago. Michelle listened to the discussion intently and came away with more knowledge and a few more insights about the project she was working on. She was extremely happy to have found out about **Polyzign Drinks**.

After the panel was over, Michelle walked over to the professor and the superintendent and asked a few questions regarding the topic. She also met a few other young professionals her age that lived in her neighborhood. They agreed to meet up for drinks the following weekend. Michelle finally began to feel like she was settling down in her new city and meeting people who were interested in similar things.