

SCIENCE OF VULNERABLE POPULATION ENGAGEMENT FOR DISASTER PREPAREDNESS

*Rubayi Srivastava, PangeaReseau PPP Project Management United States
rubayi.srivastava@gmail.com*

Abstract. The global economic crisis has visibly impacted program capacities in the not-for-profit sector. Conversely this has led donors to be more innovative in transferring resources in both tangible and knowledge forms for social good initiatives. In the United States current disaster education does not adequately address the needs of the at-risk population. In this report I focus on capturing the process of effective disaster education with emphasis on identifying and managing talent and creating a community of practice for outreach programs. With less stress on financial resources, the paper builds on how a concept map (Cmap) interface can create a dynamic relationship with lessons learned at every step, and encourage innovative project management and grassroots methods of networking. By delineating a process rather than action steps, this application of the concept map increases the effectiveness in transferring knowledge and customizing a program to a range of communities with similar disaster education needs.

1 Introduction

A program is only as strong as its people and the leaders who guide them. With clear links between talent and program strategy, between trainers and participants, and with open communication, managers can adapt to uncertain times, literally weather the storms, and sustain the initiatives. Good systems' thinking depends on being able to collaborate above and across organizational units when it is important to do so. A comprehensive outreach program in community disaster education (CDE) and disaster response training was adopted for the Goleta Prepare Now! /¡Goleta Prepárese Hoy! (GPN) initiative, a grant-funded program by Aware & Prepare (an Orfalea Foundation initiative). GPN has set the following goals for the year:

- increase readiness and promote emergency preparedness via public information workshops, special events, meetings, and media campaign;
- share information and provide emergency supply kits to “at-risk populations”
- train volunteers in neighborhood emergency preparedness and response (Community Emergency Response Team – CERT Training)
- celebrate September as Emergency Preparedness Month with public outreach and community displays at key locations

My at-risk population comprises non-English-speakers who do not understand English language outreach materials; recent immigrants who are reluctant to ask for help; disabled persons with special needs at home or work; elders who cannot afford to purchase disaster supply kit; and persons living in modular homes susceptible to infrastructure damage during moderate disasters. Obviously the program needs to be dynamic enough to meet the needs of an evolving demographic profile in an environmentally sensitive region.

The problem was how to develop the program to live beyond the life of the grant and capture the lessons from specific experiences that go beyond demographics or geography. I mapped the existing resources to evaluate the assets present in the program. This consisted of a Municipality (City of Goleta), a local chapter of the American Red Cross (“ARC”), and the relationships the two organizations had within the community, such as with Social Services or Public Health Departments. To facilitate the identification of leaders and developing ownership in the community I mapped the human capital under two categories to visualize the cross-over of both quantitative and qualitative assets. The first category lists the quantifiable benefits of recruiting community leaders and increasing program “ownership” through systems management; the second demonstrates a possible ripple effect that would access increased numbers of the target population. The program as a learning infrastructure has the recurring theme of systems dynamics, developed by Jay Wright Forrester, a systems scientist who was a professor at the MIT Sloan School of Management. Forrester is known as the founder of Systems Dynamics, which deals with the simulation of interactions between objects in dynamic systems, later embodied by Peter Senge in *The Fifth Discipline*.

2 The Community

“Socially created vulnerabilities are largely ignored in the hazards and disaster literature because they are so hard to measure and quantify. Social vulnerability is partially a product of social inequalities—those social factors and forces that create the susceptibility of various groups to harm, and in turn affect their ability to respond, and bounce back (resilience) after the disaster (Cutter, et al 2003).” It should be noted that transfer of information is beyond the literal translation of materials; its complexities include cultural differences and alternate avenues of information dissemination, and raises a need for interpretation suited to the distinctive socio-economic and cultural community. Informal evaluations that revealed lessons such as this were captured by the Cmap, which subsequently steered the program in a new direction – changing the role of the program manager to a coordinator and identifying volunteers, who understand the needs of the vulnerable populations, to run the workshops. This “node” on the map also linked back to the trust-building efforts decelerated previously by the cultural distance between the program manager and the target populations.

An effective response to a disaster is exemplified by the numerous levels of preparedness available within a community. Preparedness education and training should be developed through community needs and resource assessment to determine its capacity for response during disasters of different levels of intensities. If a community has historically identified its high-risk areas and the population that resides within them, the responsible action is to initiate informed action at the local level. “Local initiatives and participation may be facilitated by training, capacity building, and resource transfers. Such local level change may require outside support, and can be sustained through a network of organizations engaged in economic, social, political and scientific action and inter-organizational learning.” (Comfort et al. 2003) A cluster of regional resources were mapped on the Cmap, these resources were connected conceptually after exploratory research and relationship-building with each unit, such as the local University (UNIV), Community Action Commission (CAC), and a Medical Corps residing under a Government Public Health Department (PubH). As a result, the program enhanced the network, increased the instructor base, attained knowledge, and shared the networks to promote and conduct CDEs.

3 The System

In the Fifth Discipline, Peter Senge explains how systems thinking transforms problem solving. Systems thinking encourages you to see the entire Figure and the interactions between the parts rather than viewing them in fragments. The process in itself helps us recognize the importance of the relationships between segments, eventually drawing out a causal and circular understanding of processes rather than linear stratification. Furthermore, multipliers are measured for positive and negative (internal and external) impacts and spatial change in the distances between the ripples (Senge, 2006). This big Figure approach highlights and contextualizes fragmented functions within a program to improve priority setting strategies that can be transferred through concept mapping. The framework allows us to concentrate existing community assets along with needs, in the process reveal new and complex forces that may come into play, and apply these to build a program that is sustainable, contextualized, and transferable to other communities.

3.1 Program Practices

At the initial phase of the program two partnered agencies, the Santa Barbara Chapter of the American Red Cross (ARC) and the City engaged in a public-private partnership (PPP) to conduct ongoing cross-sector coordination on emergency preparedness issues.

Dynamic Program Management: is a combination of experience, academic knowledge, and improvisation techniques that creates a powerful learning experience. This allows for increase in effectiveness, intuitive judgment, and the ability to leverage available resources to be responsive and proactive. When participants refine their abilities to respond to unanticipated challenges, they promote innovation and creative problem solving, build trust and teamwork, and foster better communication. They also draw attention to the challenges and the steps taken to mediate them in the evaluation and re-design phases. The GPN program was faced with the challenge of providing Community Emergency Response Team (CERT) trainings without a certified trainer within its communities. Alongside, I needed to identify community participants for the first class who would be interested in additional training to fill the void of local instructors. Smaller general preparedness workshops (CDEs) throughout the community were mapped to identify

candidates for the initial training; they were also identified through community service organizations. The malleability of the program, calculated on the Cmap contents, proved to be beneficial for outreach with the low-income Spanish-speaking population, a core part of the City’s population. An unfunded Spanish pilot program known as “Listos!” needed an audience and a facility, which was provided by the GPN program in exchange for the utilization of the qualified instructor for the CERT program. This relationship with the Listos! program and the engagement of the low-income Spanish-speaking population, led to the inclusion of a Spanish language course within the GPN initiative. The Cmap illustrated a demand and displayed an array of resources for educational workshops previously indiscernible to the initiative.

Social constructivism and participatory leadership: is a shared learning process where groups construct knowledge for one another, collaboratively creating processes with shared impact. I mapped the level of involvement and capacity in the programs within the communities. After identifying their objectives, I found where they aligned or could parallel the GPN objectives on the Cmap. This resulted in strategically approaching the community groups and developing a partnership with win-win incentives, which led to in increasing the network with the at-risk population and building ownership within the community organizations that service the target population. The Cmap illustrated how community programs such as Community Action Commission (CAC) could install preparedness training within their existing processes. CAC is a regional program that assists low-income non-English speaking parents, who partnered with GPN to reach some of their at-risk population of parents of young children within the community. The increased network provided by the GPN initiative helped empower a less active ad-hoc CAC emergency planning committee, which is now designing its first facilities emergency drill. The conceptual relationships of the community-based planning efforts became my indicators for program sustainability and installation within existing systems in the community. “Disaster planning that includes input from the community produces not only higher quality plans, but also far higher levels of community approval and confidence in the plans” (Carafano, et al., 2007, p.3).

Talent Management and Engaging the Population: According to the McKinsey Quarterly reports in 2006 and 2007, having recognized the need for strategic human resource management, organizations have drastically increased investment into recruitment in the last few years. Yet the widespread belief that expensive efforts will solve the problem has largely proven false (Guthridge et al, 2008). With the increased investment, boards and stakeholders have given more attention to the issue of talent acquisition to attain comparative advantage. With the best of intentions, however, many of these efforts have remained superficial, resulting in increased waste of resources, particularly for organizations that still believe talent management to be a short-term requirement, meant for high-priced contracts, or only reserved for top-performers. To address this issue, I documented the entire program process, from design to implementation, through Cmap to enable the development of a toolkit for the next program of its kind. Alongside, to combat the lack of success in revitalizing the network and the program, the talent must be targeted at all levels. The Cmap helped identify and mobilize these individuals who were involved at different stages of the outreach, and helped them realize their worth within the larger vision of the program.

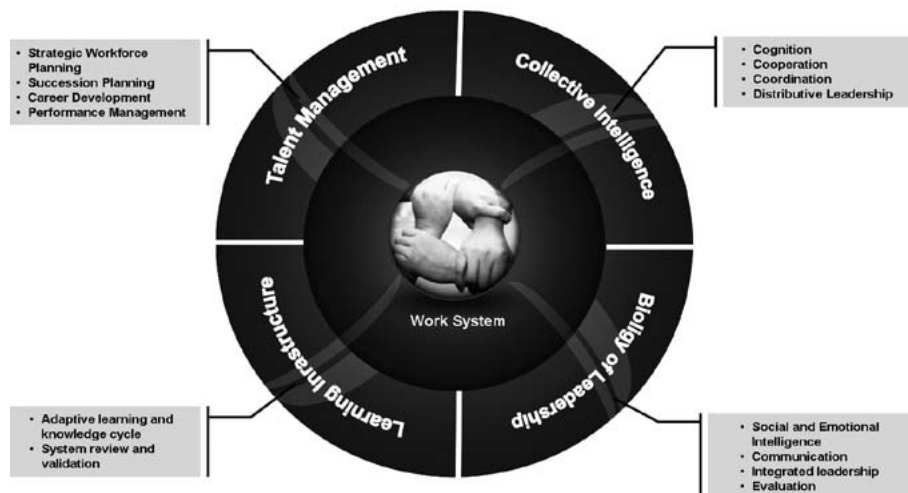


Figure 1. Strategic Human Resource Management

4 Owning the Process and Enhancing the Knowledge Network

Most importantly, systems thinking can be a catalyst for inspired solutions to complex problem. The advantage of receiving input from all levels of participants seeking innovative answers through a collective intelligence is that in turn the process becomes the source of empowerment. What makes this different from comments and feedback is that the stakeholder group as a whole learns together about the processes in place and how they actually play out. The benefits can only be reaped if this tool is utilized in a comprehensive manner (Figure 1). Evaluating the concept map throughout the process of program planning, design, and implementation, allowed the program to remain dynamic and responsive to the felt needs of the population involved.

The program is the people; but no one person's contribution alone can optimize results. The selection procedure can be the most effective in developing an efficient and dynamic team, especially for small not-for-profit programs with limited resources. For the purposes of organizational sustainability and excellence the conditions underlined are: performance-oriented culture, retaining relationships, high levels of participant satisfaction, investment in win-win initiatives and development, and the use of institutional competencies in the selection and evaluation processes (Schmitt et al., 2008). To achieve and sustain excellence and optimally use human and knowledge resources, we need to manage talent proactively and have a systematic way to accomplish activities (Berger et al., 2004). Each conceptual relationship on the map played a crucial role in attracting the talent needed to sustain the program and enhance the design through their contributions.

5 The Programmatic Process and Concept Mapping

A community disaster education outreach initiative should begin with exploratory research to conduct a human and knowledge resource assessment. Grassroots trust-building efforts embedded in the process help develop a culture of material-resource sharing and networks integration. The labors in reaching at-risk populations and developing a program that would sustain itself with localized ownership of the process eventually develop into a community of practice. Project managers must capitalize on the opportunity to design a program with collective expertise and attain win-win outcomes with the stakeholders. Identifying the conceptual relationships extending the ownership of the process to the stakeholder can be represented, managed, promoted, and transferred through the Cmap as shown in Figure 2.

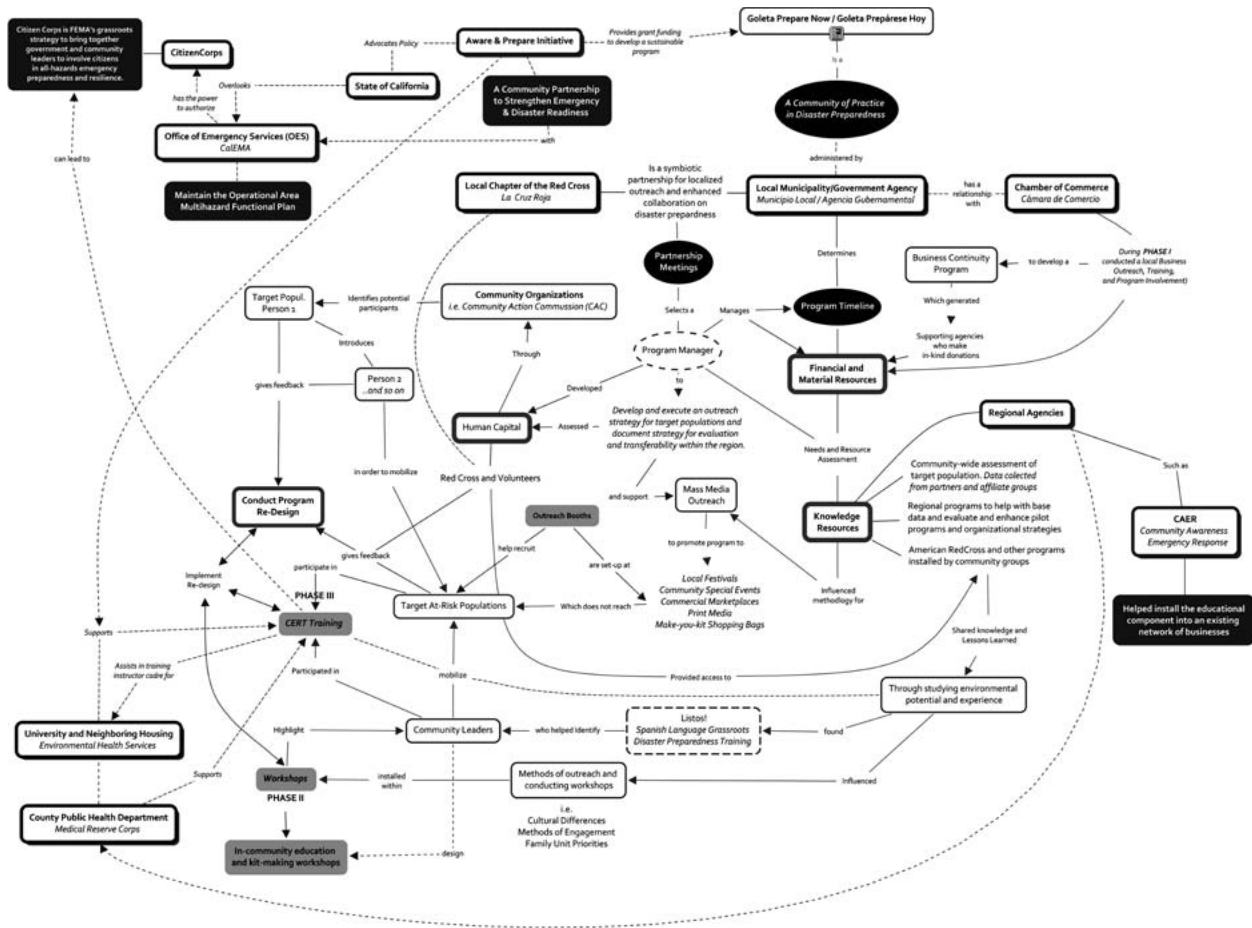


Figure 2. Concept Map of Preparedness Outreach to At-Risk Population

References

- Berger, Lance A., Berger, Dorothy R. "The Talent Management Handbook: Creating Organizational Excellence By Identifying, Developing, and Promoting Your Best People" New York, McGraw-Hill Professional, 2004.
- Carafano, James, Jennifer Marshall and Lauren Hammond Grassroots Disaster Response: Harnessing the Capacities of Communities, Backgrounder, No. 2094, Published on December 28, 2007 by the Heritage Foundation. url: <http://www.heritage.org/> (accessed, May 10, 2010).
- Comfort L., Wisner B., Cutter S., Pulwarty R., Hewitt K., Oliver-Smith A., Weiner J., Fordham M., Peacock W., Kringold F. Reframing Disaster Policy: The Global Evolution of Vulnerable Communities", *Environmental Hazards* 1(1): 39-44.
- Guthridge, Matthew, Komm, Asmus B., Lawson, Emily, "Making talent a strategic priority," *The McKinsey Quarterly*, 2008 Number 1, pp.49-59.
- Senge, Peter M., *The Fifth Discipline: The Art & Practice of the Learning Organization*. New York: Currency Doubleday, 2006.
- Schmitt, Neal, and Brian Kim *Selection Decision-Making*, in "The Oxford Handbook of Human Resource Management - Oxford Handbooks in Business and Management" edited by Boxall, Peter et. al., 2008.
- Susan L. Cutter, Bryan. J. Boruff, and W. Lynn Shirley, 2003. "Social Vulnerability to Environmental Hazards," *Social Science Quarterly* 84 (1):242-261 cited in Susan L. Cutter, 2006. "The Geography of Social Vulnerability: Race, Class, and Catastrophe," URL: <http://understandingkatrina.ssrc.org> (online article, accessed, May 10, 2010).