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ExplOre, Educate, Expand: The ExplOratorium's Education Abroad Youth Program

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PIM 67

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ABSTRACT

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This capstone describes the design of an outbound, education abroad program that will take place in Dharamsala, India over a five-week period. It will bring together young adults from the U.S. and Tibet for an intercultural learning experience. The program will provide hands-on opportunities for participants to be engaged in academic, philosophical and personal growth. The educational workshops and activities will be centered on neuroscience, meditation, and Buddhist conceptions of science and the natural world. At the same time, themes of intercultural communication and competence will be explored in-depth.

As a foundation, the program will build from an existing partnership between Tibetan Buddhist monastic communities in India, and the ExplOratorium, a museum located in San Francisco, CA. The partnership has led to the formation of an organization called Science for Monks, which brings scientists from the ExplOratorium to India to teach Tibetan monks and nuns about science, and to explore together the differences and intersections between Western scientific thought and Buddhist beliefs.

Through activities such as meditation sessions, and seminars on topics like neuroscience and Buddhist scientific philosophy, a group of 24 youth (half from the U.S., half from Tibet or northern India) will learn about and experience their cultures together. Towards the end of the program, they will form small groups and team up with monks and nuns who are participants in the Science for Monks program, and will collectively contribute to an exhibition on science and Buddhist thought that will be presented in India and beyond.

For participants, the program design will help to develop intercultural competencies, and increase their understanding of both neuroscience and Tibetan Buddhism. At the community level, the program will propagate global awareness and appreciation of cultural differences within communities in both San Francisco and northern India. At the same time, it will further the educational missions of the two involved constituencies: the Exploratorium and the Tibetan Buddhist community. Lastly, the program design will contribute to both the international education and museum fields by providing a replicable example of a short-term, education abroad summer program for youth.

INTRODUCTION

The idea presented in this capstone is to create a short-term, educational abroad program for youth that is steeped in the exploratory vision and experiential learning practices of a San Francisco-based museum called the *ExplOratorium*. The ExplOratorium is known for its hands-on exhibits on science, art, and human perception, all held within a museum that encourages curiosity-driven learning and independent discovery. The hope in designing the new program is to utilize a current educational program as a starting point, leveraging existing community partnerships and expanding the articulated goals of the existing program to meet the needs of a youth audience.

The program from which the new one will be built is called Science for Monks. It brings science educators from the U.S. – mostly from the ExplOratorium and several U.S. universities – to India for an intercultural experience that joins these educators with adult monks and nuns who practice Tibetan Buddhism. The result is a series of collaborative workshops, planned and co-facilitated by the adult participants, which examines the similarities and differences between Western scientific thought and Buddhist philosophy. The newly designed abroad program aims to bring youth, ages 15-16, from the U.S. in contact with Tibetan youth for a five-week immersive experience in Dharamsala, India, while exploring similar thematic material to the current program.

The educational goals are similar to those of the Science for Monks program but the itinerary is expanded to encompass a homestay and multiple excursions. Along with the goals of increasing knowledge about Tibet, Buddhist teachings, and science, the educational objectives of

the new program incorporate the development of intercultural competencies for all participants. Participants will be ushered through Kolb's Experiential Learning Cycle (1984) (Appendix A) by reflecting upon their experiences and ultimately incorporating this learning into future actions. The youth will likely find themselves understanding the other culture's point of view more than before, representing a shift along Bennett's scale of Intercultural Relations (1993) (Appendix B).

While the participants will experience the acquisition of knowledge, skills, and awareness at an individual level, on an institutional level, the ExplOratorium will be able to further its mission of internationalization (which, it can be argued, is implied more than stated in its self-published documents). At the same time, the Tibetan Buddhist community in India can continue to pursue its goal of educating its monastic and secular communities about science from a Western perspective; this directive stems from a vision that the Dalai Lama articulated over a decade ago.

Returning to the new program's proposed design, the hope is that the curriculum and structure will provide 24 youth with the opportunity to come together to experience five weeks of hands-on learning in an intercultural environment that facilitates personal growth and the development of new skills, all through an experiential education lens and with a focus on understanding and embracing cultural diversity. Added to that, the vision for the creation of the program is that ultimately, a new model for education abroad will be created within the world of museums, a model that other museums can look to for inspiration and replication. Instead of museum education taking place primarily on-site or in the local community, museumgoers will help to stretch the boundaries of museum education to embrace and explore other countries and cultures, bringing a new level of cultural awareness both to the host communities abroad and to the museum community itself.

PROGRAM BACKGROUND

The ExplOratorium

Upon entering the cavernous space in which the ExplOratorium is housed, the museum visitor is immediately greeted with a sense of movement, color, and light. Visitors scamper through the dark hangar as exhibits clatter, glow, and vibrate. Yet while the exhibits seem to have lives of their own, they only reveal their secrets when someone interacts with them, turning a crank, pulling a lever, or in some cases, getting inside the exhibits themselves.

The ExplOratorium is a museum of science, art and perception. It consists of hundreds of hands-on exhibits that are organized thematically.[i] Each exhibit invites the visitor to actively explore scientific phenomena (including physics, biology, and psychology) through an experience or interaction with the exhibit. There is no prescribed way to explore an exhibit, or even to walk through the museum. A day at the ExplOratorium is meant to be self-guided and curiosity-driven.

The exhibits are only a fraction of the ExplOratorium's offerings. The museum is home to dozens of classes, professional development workshops, and public programs.[ii] Outside of the museum's walls, ExplOratorium staff partner with local community organizations, schools, and educators by offering workshops, training, curriculum development, and educational resources. Artists and cultural institutions around San Francisco take part in creative collaborations with the ExplOratorium, such as art exhibitions, music performances, cultural preservation projects, and film screenings.

Farther afield, museums across the world commission exhibit builders at the ExplOratorium to make and ship copies of the museum's signature exhibits. There are also dozens of print publications that teach people how to build their own mini exhibits, along with providing hands-on activities and teaching strategies. These resources are also available online. The ExplOratorium has over 40,000 pages of original content on its website, which reaches an audience of 20 million people worldwide per year (Inside the ExplOratorium, 2010, p. 19). See Appendix C for more information on the history of the museum.

The ExplOratorium's Mission

The ExplOratorium's mission is to "to create a culture of learning through innovative environments, programs, and tools that help people nurture their curiosity about the world around them" (Inside the ExplOratorium, 2010, p. 8). The onus is on learning through curiosity-driven, creative experimentation, with the ultimate goal of leaving with a new set of tools through which to explore the world and its natural phenomena. Frank Oppenheimer, the founder, felt that it was equally important for these tools to help the learner gain awareness of his/her own process of learning, both in formal and informal environments (Inside the ExplOratorium, 2010, p. 8).

Oppenheimer believed that in order to explore science, art and human perception, one had to embrace the process of experimentation, in which asking questions, making mistakes, and taking diversions were instrumental. He felt that each visitor should have a unique journey through the museum, one that involved sensory experiences and direct involvement with

exhibits. To this day, the programs that have grown and evolved continue this legacy of experiential education.

Science for Monks

The new program's education abroad experience will center on a partnership that the ExplOratorium has nurtured since 1999 with communities of exiled Tibetan monks and nuns in India. The program, Science for Monks, began after the Dalai Lama announced that he wanted the Tibetan monastic education program to include a science curriculum.[iii] Within the community of exiled Buddhist monastics in India, a group was chosen to meet with Western scientists in 2000. Over several years, they learned about science and engaged in dialogue about the connections between Buddhism and science. Since the program's inception, 30 Western scientists have instructed over 200 monks and nuns. The educators from the U.S. go to India approximately twice a year for a two-week workshop, meeting with the same cohort of monks and nuns for a period of 2-3 years, building skills and preparing the monks and nuns to independently teach science to their peers after the training program is complete. The topics covered have included biology, neuroscience, physics, cosmology, and mathematics (www.scienceformonks.org).

There are several other programs that have engaged with the Tibetan Buddhist community in a similar fashion: Emory Tibet Science Initiative and Science Meets Dharma have goals similar to that of Science for Monks. They aim to investigate the links between Western scientific thought and Tibetan Buddhist conceptions of the natural world through the intercultural exchange of ideas (Yee, 2009). The tangible results of these collective efforts include increased

scientific literacy within Tibetan monastic communities, the establishment of science centers at a handful of monasteries and nunneries in India, new words in the Tibetan language that capture scientific terms[iv], science textbooks written in Tibetan, and new science curricula taught at both monastic and secular schools in India.

Though much has been learned and accomplished through these programs, there remains the potential to enact even greater change and accomplish wider-reaching educational results. The fact is that all of those involved in Science for Monks have been adults; even within the Emory programs, the youngest participants are college-aged. As such, there is a great opportunity to extend this learning, and thereby the potential benefits of the program, by reaching out to a younger audience, as the new program proposes to do.

Program Mission

Keeping in mind the structure and goals of Science for Monks, which are the roots of the new education abroad program, one can better understand the underlying ideals of the new program. Its mission is to engage youth participants in a five-week experiential learning program in order to develop intercultural competencies, facilitate hands-on workshops on neuroscience and Buddhist philosophy, and further the Tibetan Buddhist community's self-articulated goal of learning about contemporary scientific concepts from a Western perspective. Furthermore, by expanding Science for Monks to encompass a youth audience, the ExplOratorium will increase its internationalization efforts on an institutional level. It will also be able to offer a cutting-edge program design to other museums that could replicate the education abroad model that is presented. Another benefit of the program is that Science for Monks will have a larger, younger participant base, which will ultimately disseminate scientific knowledge into a broader pool of

Tibetans, while at the same time developing intercultural competencies in a young participant group made up of both Americans and Tibetans.

THEORETICAL FOUNDATIONS and RATIONALE

Experiential Learning

The design of the educational program has the intention of facilitating the *experiential learning cycle* for its participants, moving through a series of experiences that relate to neuroscience, Tibetan Buddhist culture, and intercultural communication. Experiences unto themselves do not comprise experiential learning[v]; rather the experience has to be followed up with a series of steps in which reflections, observations, conceptualizations, and experimentations round out the cycle (Lutterman-Aguilar & Gingerich, 2002, 43). David Kolb, who developed the Experiential Learning Theory with Roger Fry[vi], states that learning is "the process whereby knowledge is created through the transformation of experience" (Kolb, 1984, p. 41).

In the ExplOratorium education abroad program, a series of potentially transformative experiences would be offered, along with structured and unstructured opportunities to help participants move through the experiential learning cycle. Kolb describes the cycle in this way: "…immediate or concrete experiences are the basis for observations and reflections. These reflections are assimilated and distilled into abstract concepts from which new implications for action can be drawn. These implications can be actively tested and serve as guides in creating new experiences" (2000, p. 3).

The four phases of the cycle can be summed up with the terms: Experiencing, Reflecting, Generalizing, and Applying (Smith, 2001, p. 1). The idea is that the learner has an experience (phase one), and then makes observations, describing and reflecting upon that experience (phase two). In phase three, the learner develops abstract concepts and generalizations about the experience, drawing connections between past experiences in their lives. Eventually this leads to putting these new principles into practice in future situations (phase four) (Kolb, 1984, p. 14). Kolb calls these phases *Concrete Experience (CE), Reflective Observation (RO), Abstract Conceptualization (AC),* and *Active Experimentation (AE)* (1984, p. 30). (See Appendix A)

The structure of the education program will help to provide opportunities for all phases of the cycle. The concrete experiences (phase one) take place during every day of the trip. For instance, a memorable or transformative moment could be as simple and routine as sharing a meal, or as formalized as a comparative discussion on Western and Buddhist views on science and the natural world. Another example of a concrete experience is the small-group collaboration at the end of the trip, in which teams of four will collaborate with scientists and members of the monastic community to create an exhibit or presentation for an exhibition on neuroscience and Buddhist thought (see Curriculum section for more information on the exhibit).

In order to provide structure for Reflective Observation (phase two), all participants will document their observations and learning through personal journals in which they will write about their daily experiences and observations. Additionally, the youth will engage in facilitated small- and large-group discussions on a weekly basis in which they will share reflections, and compare and contrast experiences – all elements of the second phase of the experiential learning cycle.

In preparing to finish the program, participants will further engage with their observations and reflections of their personal growth, finding new language to use in articulating these ideas and thinking about the larger concepts at play (phase three). With this, participants will be prompted to think about how they can integrate their learning into their home lives, schools, and communities. The hope is that this will encourage them to actively seek out new experiences in which they assimilate their realizations from the program (phase four).

Returning once again to the ExplOratorium, it is evident that visitors who walk the museum floor, engaging with exhibits, tend to learn through experience – this is by design. The hope in creating the educational abroad program is to extend the ExplOratorium's hands-on learning experiences by carrying the vision of the museum, of creating a "culture of learning through innovative environments, programs, and tools," into an intercultural setting.

Internationalization and 21st Century Skills

A tangible goal of the creation of an education abroad program at the ExplOratorium is to further internationalize the museum and its offerings. The ExplOratorium's mission statement does not explicitly state that internationalization is a concrete goal. Yet an argument can be made that further internationalizing the museum and its programs would help the ExplOratorium to realize its full potential. It is also clear, by reading between the lines of several self-published ExplOratorium documents, that internationalization is an implicit goal, and one that needs to be substantiated and made explicit. Ultimately, the creation of an experiential education program that takes place abroad would bring the museum one step farther in taking its mission to new heights.

Here is a statement from an ExplOratorium promotional publication that describes its future vision:

> Right now, the ExplOratorium is an explosive force being held in by too-small walls. But we've got our sights set on a future that will see us well on our way to setting and achieving new goals for the twenty-first century. We hope you'll come along for the ride (ExplOratorium, 2010, p. 9).

One can interpret "too-small walls" as a literal reference to the fact that the museum has outgrown its current space, and will be moving to a new location in January of 2013. But the same statement can also be interpreted as a nod towards moving to a more global and globally inclusive model.

Returning to the statement from the ExplOratorium's internal publications, this time with a slightly different lens, a new interpretation can be made. "We've got our sights set on a future that will see us well on our way to setting and achieving new goals for the twenty-first century" (ExplOratorium, 2010, p. 9). In short, this sentence seems to be a reference to the "21st Century Skills" movement. The movement was developed to redefine ways of thinking about learning and education to suit the current global climate and challenges. It aims to equip students with personal, professional and academic competencies that focus on interdisciplinary problem-solving and critical thinking.

The "21st Century Outcomes" are grouped into the following categories: Core Subjects, Learning and Innovation Skills, Information, Media and Technology Skills, and Life and Career Skills (The Partnership for 21st Century Skills, 2009). These categories are further broken down into desired goals and outcomes for the bearers of these 21st century skills, such as increased "global awareness," "cross-cultural interaction," "[collaboration] with others," and "[ability to] work effectively in diverse teams" (The Partnership for 21st Century Skills, 2009). If one were to

develop an international education program containing experiential and collaborative elements, as this capstone proposes, the program's structural and philosophical underpinnings would lend itself to the 21st Century Skills philosophy and features of internationalization. If, then, the ExplOratorium's statement were a nod towards this education movement, then an experiential travel program would be in line with the 21st Century Skills that the museum hopes to cultivate. In essence, this then becomes an argument in favor of developing such a program. Similarly, the education abroad program would be a step in the direction of internationalizing the ExplOratorium's repertoire, which is an implicit organizational goal.

A second excerpt from the ExplOratorium's publication suggests the creation of global learning experiences:

> The ExplOratorium's reach goes far beyond the museum's walls…extending learning experiences to people all around the world…Our goal is to…let go of old, passive models of learning and [help learners] see themselves as active partners in the learning process (ExplOratorium, 2010, p. 6).

The intent that lies within this statement seems to be that the ExplOratorium hopes to take its experiential, learner-focused practices abroad. Again, this is a less-than-direct way of referencing a move to expand the ExplOratorium's programs beyond a single country or culture.

What would bring the ExplOratorium to offer programs abroad, to incorporate more multicultural experiences into its roster? One incentive may be that the ExplOratorium wishes to be a part of the ongoing dialogue about national education policy (ExplOratorium, 2012). Although the museum has already been identified as a key player in STEM[vii]-related science discussions, there is an increasing amount of attention being paid on a national level to fostering intercultural competencies in the educational realm. By creating opportunities for intercultural

learning abroad, the museum would situate itself as a crucial partner in the dialogue about educational policy.[viii]

Aside from wanting to be a part of the national education dialogue, another possible rationale for internationalizing the ExplOratorium is "institution-building," as scholars Knight and de Wit term it. They elaborate on "institution-building" within a discussion of Stakeholders' Rationales and Incentives. In their words, "internationalization…may enable initiatives to be taken that would not otherwise be possible on the basis of local resources and/or expertise" (Knight & de Wit, 1995, p. 14). Breaking this sentence down, these "initiatives" could amount to wildly different gains, from obtaining international monetary support (i.e. "resources"), to getting the scholarly perspective of educators from a different culture "expertise". Knight and de Wit also mention increased recognition or ranking within the international community within this discussion.

A third rationale for internationalization is to improve the quality of the ExplOratorium's educational offerings and research. In de Wit's own words, "an international approach attempts to avoid parochialism in scholarship and research and to stimulate critical thinking and inquiry about the complexity of issues and interests that bear on the relations among nations, regions and interest groups" (2002, p 13). By offering the opportunity for cross-cultural dialogue in an international setting, the museum would be continuing to innovate as a thought leader and would maintain its position at the forefront of education.

Lastly, the ExplOratorium's idealistic beginnings bring to mind a fourth incentive for internationalization. The museum may hope to go beyond its walls in order to pursue the lofty goals of increasing cultural understanding and knowledge. Similarly, as noted by international education scholars Knight and Altbach, many nonprofit universities have made the effort to

internationalize because they "wish to enhance research and knowledge capacity and to increase cultural understanding" (Knight & Altbach, 2007, p. 292).

In summary, creating an experiential education program abroad would be the next logical step in furthering the museum's stated and unstated goals of having a global impact in the coming years. Perhaps, though not explicitly stated, the ExplOratorium hopes to further "internationalize" and adopt the 21st century movement's perspective in order to gain intercultural awareness, knowledge, resources, and an ability to keep pace with other global innovators[ix] in the museum and education fields.

Intercultural Competencies

The ExplOratorium is a place of wonder and curiosity-driven exploration. The exhibits, curricula, and programming are driven by a collective love of hands-on learning and by a respect for each learner's differences. A primary goal in developing the education abroad program is to greatly expand the benefits and impact of the museum's approach to learning. The participants will have the opportunity to live in a cross-cultural setting and work with local scholars and community leaders, with the potential to alter their worldviews and increase their intercultural competencies. The aim is that by the end of the program, the participants will have experienced movement and change in their skills and awareness around intercultural communication and sensitivity.

Within the ExplOratorium learning community, examining the world has mostly meant looking at scientific and natural phenomena primarily within familiar cultural bounds. The idea in creating an ExplOratorium study abroad experience is to provide an opportunity for youth to

expand their worldviews, including their conceptions of science and self. As Fantini (2004) explains, "while experiencing other cultural contexts provides opportunities to learn about the host language and culture, it also provokes reflection and introspection about aspects of one's own culture that are usually taken for granted" (p. 12). Thus, all youth participants would have the potential to diversify their viewpoints of both foreign cultures and their own.

"Individuals who have received largely monocultural socialization normally have access only to their own cultural worldview" (Hammer, Bennett, & Wiseman, 2003, p. 423.) Both the U.S. and Tibetan youth participants in the program have only been exposed to cultural perspectives within their reach. (In the case of the Tibetan participants, this may include cultural inputs both from their Tibetan heritage and traditions, and from their current home, northern India.) The ExplOratorium education abroad program endeavors to offer exposure to new perspectives on science and culture for all involved participants. The benefits of this come in the form of *intercultural sensitivity*, which scholars define as "the ability to discriminate and experience relevant cultural differences" (Hammer, Bennett, & Wiseman, 2003, p. 422).

The careful and nuanced examination of cultural difference can lead to the development of (or increase in) *intercultural competence,* "the ability to think and act in interculturally appropriate ways *(*Hammer, Bennett, & Wiseman, 2003, p. 422-423*)*. The ultimate argument in favor of developing these worldviews is that having a greater understanding of other points of view could "[improve] relations across cultures" by enhancing communication skills (Bennett, 1993; Hammer, 1999), and perhaps also a feeling of empathy. So while the museum study abroad program attempts to educate youth on the nuts and bolts of neuroscience and traditional Buddhist beliefs, there is a larger goal in mind. By studying natural phenomena from two different cultural perspectives, youth participants learn to value both ways of approaching

science, seeing the unique contribution of each. Through these studies, youth participants can develop a broader, culturally inclusive view of the world.[x]

How can someone develop greater intercultural sensitivity? With exposure to new people, places, and ideas, a person often demonstrates a noticeable change in behavior and attitude. When youth from the U.S. and Tibet compare their explanations of natural phenomena, discuss scientific principles, share a meal around a table, and live under the same roof, the hope is that there will be observable changes in their relationship to self and others, as well as to learning. To measure intercultural sensitivity, the scholar Milton Bennett developed a progression of six stages of personal growth (see Appendix B).

Bennett's first three stages are characterized as *Ethnocentric*[xi], while the latter are labeled as *Ethnorelative*[xii] (Bennett, 1993, p. 9). The idea is that intercultural competence can be seen as a spectrum, with each individual existing someplace on that scale. Given the opportunity to have a meaningful, reflective intercultural experience, a person can progress from wherever they have begun to a point farther along the spectrum and closer to ethnorelativism. In the case of the ExplOratorium study abroad program, the intention is that youth will learn about other ways of being and understanding the world, and will view these perspectives and beliefs as equally valid, recognizing difference without making a value judgment.[xiii] This corresponds with the last stage of Bennett's scale, in which an individual arrives at the understanding that "one's own culture is not any more central to reality than any other culture, although it maybe preferable to a particular individual or group" (Bennett, 1993, p. 26).

A key component of the program is that the U.S. and Tibetan youth will attend experiential seminars together and take part in hands-on activities and shared discussions. For instance, all participants will engage in meditation practices throughout the program. As a

complement to this practice, they will learn about latest neuroscience discoveries that connect brain scan techniques to the knowledge that meditation alters the brain in tangible ways. These educational moments will provide an opportunity for the teachers and students alike to compare and contrast their Tibetan Buddhist and Western points of view, particularly of science. It is anticipated that if the participants from the U.S. come to realize that "what [they] have been taught as objective science turns out to be culture-bound, it [will be] both disillusioning and illuminating" (Kim, 2002, p. 190). In these moments – as they see the ideas of their counterparts to be profoundly different but equally relevant – the youth will have the opportunity to move in the direction of ethnorelativism. The same concept applies to the Tibetan youth, who will learn about Western principles of science while confronting and potentially embracing the idea that there are multiple explanations for the same phenomena.

All in all, the hope is that the youth who participate in the ExplOratorium's study abroad program will have experienced movement and change in building their intercultural competencies and awareness. They will have learned facts and skills, and will have taken part in new experiences. These experiences, both the structured and unstructured ones, will play a role in helping to shape each individual's worldview, intercultural competencies, and personal toolkit of skills.

NEEDS ASSESSMENT

The development and success of the ExplOratorium, and later the Science for Monks program, were born out of the visionary thinking and hard work of many individuals. Extending these visions of experience-based education, the proposed program design evolved from deep

thinking and insight into the needs of various communities and stakeholders, including the Tibetan Buddhist community, potential participants, and the ExplOratorium.

The Origins of Science for Monks

The person who had the idea of connecting educators from the ExplOratorium with the Science for Monks program is Bryce Johnson. Prior to the museum's involvement in 2009, Science for Monks had actually been in existence in one form or another since 1999.

In the late 1990s, Johnson, an American biologist, was living in the U.S but ready for a life change. He heard rumors that the Dalai Lama had publicly expressed a strong desire for Tibetan Buddhists to learn about science.[xiv] Hoping that he could help actualize the Dalai Lama's goal, Bryce seized the opportunity and moved to Dharamsala, where the Dalai Lama and the majority of exiled Tibetans were living. In 1999, the Dalai Lama asked the Director of the Library of Tibetan Works and Archives, Geshe Lhakdor, to carry out this mission. The Library is a non-sectarian institution that a key player in the movement to preserve Tibetan culture in the face of persecution from the Chinese government. It has an extensive archive of Tibetan books and religious paintings that were carried by foot from Tibet when waves of Tibetans were driven into exile in India.

When Johnson moved to Dharamsala, he made connections within the Buddhist community. Using his science training, he and a small team established a rudimentary science curriculum (then called Science Education Program for Tibetan Monastics) within several monasteries. Around this time, Bobby Sager of the Sager Foundation became interested in the project; he would eventually become the program's major financial backer. In early 2002, the

project, now termed Science for Monks, grew larger and created a website. Scientists and educators were brought over from U.S.-based institutions and universities to help teach science to monks (B. Johnson, personal communication, 2012).

Stakeholders

Each stakeholder involved in the proposed education abroad program stands to gain from its creation; furthermore, the program would fill an articulated or perceived need in each case. The stakeholders involved in this program are the following: the community of Tibetans in India, particularly the Buddhist community; the program participants; the Science for Monks program; and the ExplOratorium.

In order to carry out an effective needs assessment, it is crucial to mention that the Dalai Lama, the spiritual and former political leader of Tibetans worldwide, had a vision for Tibetans over a decade ago that Science for Monks has helped to carry out. He publicly expressed his desire for the Tibetan Buddhist monastic community to learn about science from a Western perspective. He further articulated this in his book, The Universe in a Single Atom, in which he argued that both science and Buddhist thought must be studied in order to come to a complete, nuanced understanding of the world (Dalai Lama, 2005). His ultimate goal for Science for Monks was to collaborate with scientists in order to educate a core crew of monks and nuns, who would then disseminate this knowledge throughout both the monastic and secular Tibetan communities. Beyond the acquisition of knowledge, a secondary goal was to encourage the cross-pollination of ideas in order to create greater cultural awareness and understanding, and subsequently a more peaceful world. In essence, the Dalai Lama's vision resulted in the creation

of Science for Monks, and adding a youth component to the program would be a further articulation of his stated vision.

For program participants, the development of intercultural skills that can render them more globally aware and competent is a perceived need that justifies the creation of the education abroad program. In an era of shrinking borders and increased global communication, possessing these skills can be seen as crucial. One argument for attaining these skills is that they are linked to increased job prospects. Zha Qiang discusses the demands of globalized societies, connecting it to the need for education to provide "not only academic and professional knowledge, but also multilingualism, and social and intercultural skills and attitudes" (2003, p 1).

So, too, the ability to communicate effectively across cultures represents a movement towards a more peaceful world, one in which decision-makers recognize the value of having a diverse range of perspectives. If the participants of the program come away from their experience with a more open mind, this will affect their actions into the future, empowering them to exchange in fruitful, intercultural interactions.

Another direct benefit of the program is that Tibetan participants would learn more about their own culture. The tumultuous political history of Tibet has seen China make repeated attempts at consciously suppressing Tibetan culture. (See Appendix D for more information on the history of Tibet.) China's behavior prompted the Library of Tibetan Works and Archives (and many Tibetans) to rescue books, manuscripts, and traditional Buddhist paintings; the library saw the need to collect artifacts in order to engage in cultural preservation. For Tibetan exiles who are separated from their native country and existing as a marginalized minority (this

includes the 12 Tibetan program participants), learning about their Tibetan heritage can be seen as crucial to their cultural survival.

The creation of a sister program using the Science for Monks mission and community partnerships would extend the reach of Science for Monks by dipping into a new demographic. Currently, Science for Monks principally engages adult monks and nuns as participants; the new program would engage a new audience – youth from the U.S. and Tibet – and would bring them into contact with a monastic group, creating a multilayered experience that would draw from a greater range of ages, geographic locations, and life experiences.

From the standpoint of financial viability, the new participant pool would enable Science for Monks to apply for grants and secure funding specifically designed for youth programming, whereas the current program only elicits donations and financial support from those interested in the adult education model. (This would ultimately send gains back into the communities of participants, as more funding amounts to greater participation and a broader impact.)

As for the ExplOratorium, the implementation of the new program would diversify its programmatic themes, the scope of its educational reach, and its audience – all of which can be seen as filling either implied or stated needs. As discussed earlier, on its website, the museum has expressed a desire to go beyond its "too-small walls" in the coming years (ExplOratorium, 2012).

The new education program would do just that, internationalizing the museum and embracing a more global viewpoint by utilizing the Science for Monks partnership to send U.S. students abroad and connect them with Tibetan youth. Another stated goal is to "let go of old, passive models of learning and [help students] see themselves as active partners in the learning

process" (ExplOratorium, 2012). The curriculum and structure of the abroad program would usher students through the Experiential Learning Cycle, bringing the ExplOratorium's hands-on, learner-focused approach to new heights.

GOALS AND OBJECTIVES

Program Goal

The goal of the new educational abroad program is to create a replicable model for an immersive, hands-on experience. The proposed program brings together youth peers from the U.S. and Tibet for a collaborative, experiential learning program, providing opportunities for participants to be engaged in academic, philosophical and personal discussion and learning – all of this in order to contribute to the creation of more interculturally competent citizens of the world.

Participant Goal

The goal for program participants is to increase knowledge, skills and awareness of Tibet and the U.S., and of their culturally bound ideas in order to further their intercultural competencies, ultimately creating global citizens equipped to make valuable and informed contributions to the world.

Program Objectives

By 2015 (over the course of three summer programs),

- **Deepen the ExplOratorium's relationship with its partner program**, Science for Monks, collaborating with twelve ExplOratorium educators and 30 monks and nuns who are new to the Science for Monks program.

- **Engage 36 host families** in Dharamsala in order to involve them in intercultural learning, increasing awareness and appreciation of cultural difference within their communities, as measured by pre- and post-program interviews, surveys, and analyses.

- **Provide in-depth training and work** for three U.S. Leaders, three Tibetan Leaders, and nine Tibetan Translators.

- **Expand the ExplOratorium's mission and goals of internationalization** by sending a total of 36 U.S. youth abroad, and working with another 36 Tibetan youth from the Dharamsala community.

- **Engage in thorough programmatic evaluation and improvement** during the two months after each summer program, using interviews and program evaluations from each participant, staff member and host family as a comparative baseline.

- **Offer participants a healthy and safe program environment** through two pre-program discussions of expectations and logistics, one on-site health and safety orientation session, and one folder of documents to be read prior to the program.

Participant Objectives

Over the course of each five-week program, participants will:

- **Utilize self-assessment tools** that measure intercultural competencies, both at the beginning and end of each program, with the goal of seeing movement on Bennett's intercultural sensitivity scale from Ethnocentrism towards Ethnorelativism.

- **Engage in at least ten experiential activities** on neuroscience and Tibetan Buddhism in order to learn about the core topics of the program.

- **Live with a peer from another culture** in a homestay environment during a three-week homestay in an effort to increase the ability to collaborate and live with someone from another culture.

- **Take part in at least five facilitated small- and large-group discussions** on intercultural sensitivity, cultural difference, culture shock, culturally-based knowledge and values, and related topics with the hope of being able to articulate in new ways their own worldviews and cultural biases.

- **Work in small, cross-cultural groups** to contribute to an exhibition on neuroscience and Buddhist thought as a way to practice cross-cultural communication and collaboration skills.

PROGRAM DESCRIPTION

Program Scope and Timeline

The new program will take place in Northern India, in the city of Dharamsala. Dharamsala is home to the exiled Dalai Lama, the Tibetan spiritual and former political leader, as well as 120,000 Tibetans – the largest number of Tibetans outside of Tibet (Yee, 2009). The primary focus of the trip will be to explore Western scientific thought and Tibetan Buddhist perspectives on science. The personal experiences, worldviews, and cultural vantage points of the participants will be reflected upon, discussed, and compared in a search for connection, interrelation, and appreciation of difference. This process will take place over five weeks, from July to early August. The complete structure is outlined in Appendix E, as well as a chart indicating the timeline for planning and implementing the program.

Participants

The participants of the program will be between the ages of 15 and 16. There will be 12 youth from the U.S., representing a variety of regions and ethnic groups. There will also be 12 local participants, all of whom will be Tibetans living in Dharamsala and the surrounding regions. Each participant from the U.S. will be paired with a Tibetan participant for a three-week homestay. The 12 pairs will, as a large group, take part in discussions, workshops, and excursions.

The core staff of the program will be two Leaders (one from the U.S, one from Tibet), an in-country logistical Coordinator, several Translators, and a transportation specialist. Other people on the periphery of the program but central to its success will be several educators from

the U.S, a group of Tibetan monks and nuns, and a handful of local lecturers, community leaders, and artists. Lastly, the director of the Library of Tibetan Works and Archives will serve as the Director, making big-picture decisions and being involved in the creation of policy, budgets, etc. while leaving the on-the-ground work to the other staff members, primarily the Coordinator, Leaders, and Translators.

CURRICULUM

Pre-Program Preparation and Support

For U.S. Participants

Prior to departure, all U.S. students will be given the following pre-departure documents: a series of emails on logistics and several articles on topics that will be explored in greater depth throughout the program. The logistical emails will contain information on visas, essential documents, packing, travel arrangements, communication while abroad, banking and money, health and safety, immunizations, and food expectations.

All participants will be expected to read articles on the following topics: a short history of Tibet, basic concepts of neuroscience, the fundamental principles of Buddhism, and a summary of the stages of ethnocentrism and ethnorelativism. They will also be expected to watch the following two documentaries: The Buddha (2010) and The Sun Behind the Clouds (2010), which discuss Tibetan Buddhism and the recent political history of Tibet, respectively.

The U.S. participants will become acquainted with the other American youth in their program two months before departure. They will engage in two group online chat sessions in

which they will discuss their personal goals and expectations regarding the program. They will also be encouraged to communicate any questions or concerns that they might have, either amongst themselves or to the Leaders.

For Tibetan Participants

The Tibetan participants will be sent the same set of articles and documentaries. Their logistical information will focus on in-country travel arrangements rather than visa information. They, too, will be expected to have two discussions with fellow participants regarding their goals and expectations, and will be encouraged to discuss concerns or questions. Given that they will all be located in or around Dharamsala, they will have these conversations in-person, at the Library of Tibetan Works and Archives located in Dharamsala.

On-Site Orientation

Small-Group Welcome and Orientation

For the first week and a half, all participants and staff will stay at the Library of Tibetan Works and Archives, which has dormitory-style accommodations. At the start of the program, each group of 12 participants (American and Tibetan) will have their own two-day orientation. The orientations will include get-to-know-you exercises (ex. discussions of personal stories and histories), large-group team-building activities (ex. Human Knot and a group drawing exercise), an introduction to the idea of cultural norms, a discussion of their self-perceived norms (in small- and large-groups), and several journaling prompts. Each small group will develop their own group charter, which will serve to articulate and document a set of collectively agreed upon

group norms around how individuals should be treated, communicated with, supported, and respected.

All participants will fill out a self-evaluative questionnaire in which they will rate their own knowledge, skills and awareness around intercultural communication, adaptability, ethnocentrism/ethnorelativism, and collaborative competencies (after first being introduced to these topics). The U.S. participants will also address – through group discussion, journaling, and role-plays – issues around health and safety, adjustment strategies for immersion in a new culture, and the basics of getting around in Dharamsala. The Tibetan group will address the same issues, keeping in mind the fact that they are in a culture and environment that is more familiar to them than Tibetan culture is to the participants from the U.S.

Large-Group Orientation

After the first two days, the small groups will combine and have the rest of their orientation together. Over the next week, the group will take part in additional team-building activities and structured exercises, including exchanging stories of where they are from, building trust through small- and large-group games, sharing words from their respective languages, and journaling quietly together. The entire group will also revisit the small-group charters and create a combined version, incorporating elements of each. At the end of the first week, the group will break into four parts and have a daylong scavenger hunt that will bring them out into the community. They will be asked to collect objects from specific locations, practice ordering food, exchange money, and interview people on the street. The Tibetan participants will aid in translation when necessary.

Homestay Preparation

In the second week of the trip, once the staff has become acquainted with the entire group, the Leaders will form pairs of American and Tibetan participants. The pairs will live together in the Tibetan participant's home from the middle of the second week through the fourth week of the program. Prior to leaving for the homestays, the group will again divide into the original 12-person teams for homestay preparation.

Each Leader will conduct a homestay orientation for a small group. Participants will be asked to journal about their questions and concerns for the homestay. There will then be a group discussion, followed by several role-plays in which participants will be presented with scenarios that may occur in a homestay setting, and the group will brainstorm strategies and act them out. For example, the American group might discuss what to do if you feel ill or do not like the food that the homestay family serves, or how to take personal space while being culturally sensitive. The Tibetan group might talk about how to make time and space for meditation or spiritual practices within the structure of the homestay, or how to be inclusive when speaking Tibetan around an American participant.

Workshops, Seminars and Excursions

Participants will attend participatory workshops and seminars throughout their five weeks in India. The intention is to give each participant a brief overview of concepts in several areas (and of the overlaps between them): Tibetan Buddhism and neuroscience. Some of the topics covered will be familiar to the participants, while others will be entirely new.

For the Tibetan Buddhism curriculum, monks, nuns and local educators will lecture and lead discussions on religious practices, philosophy, and Tibetan history. The group will visit the Library of Tibetan Works and Archives, where they will speak with its staff and pore through the library's collections of documents and artifacts.

Along with that, they will learn about different types of meditation. To supplement this, there will be guided and unguided meditation sessions several times each week. One of the meditation sessions will take place at a local monastery, and will be led by the local monks. The participants will also visit a Tibetan Buddhist nunnery, where they will meet with nuns and engage in discussion about their meditation practices and lives at the nunnery.

Another workshop on Tibetan Buddhism will involve learning about the art of *thangka* making. *Thangkas* are spiritual art works that contain Buddhist iconography[xv]. They tend to depict deities or scenes from Buddhist myths. They are used as teaching tools and as meditation aids, in that users contemplate the images within the work while meditating (Buddha Net, 2012). This workshop will take place at the local art and culture center, Norbulingka Institute, where the group will be shown old, preserved thangkas as well as contemporary examples. The facilitator of this session will be a thangka artist and expert who will lead the participants in their own thangka-inspired art project, each person drawing from their own lives, traditions, or spiritual practices.

For the scientific portion of the curriculum, the main teachers will be science educators who will already be in Dharamsala for the Science for Monks program. Though the majority of the educators' time will be spent teaching adult monks and nuns, which is the traditional format of the Science for Monks program, the educators will facilitate several hour-long sessions with the youth participants from the education abroad program. The instruction will take place in the

traditional ExplOratorium style, that is, using hands-on demonstrations and activities to illustrate concepts.

The topics covered will be basic concepts in neuroscience, including neurons, neuronal circuits, brain chemistry, and the structure and function of areas of the brain. There will be an opportunity to dissect a sheep brain. Participants will also visit a local medical facility that has equipment for conducting fMRI (Functional Magnetic Resonance Imaging) brain imaging. They will learn about the equipment used and witness a brain scan, discussing the uses of fMRI technology in the scientific and medical arenas. They will also watch several monks and nuns undergo brain imaging while meditating on various topics – this practice has been explored over the past decade in an attempt for neuroscientists to gather information about the effects of meditation on the brain. (Neuroimaging can show increased activity in specific areas of the brain while an individual is engaged in meditation.) In recent years, this type of research has been used to explore the effects of meditation using a Western scientific lens, both in the realms of psychology and neuroscience.[xvi]

To contrast this Western approach to science, program participants will also study the parts of Buddhist philosophy that offer alternative explanations or conceptions of science and the natural world. They will explore and discuss The World of Your Senses exhibit, which was curated by monks and nuns who were previously enrolled in the Science for Monks program and toured several countries in 2012. The exhibit explores sensory perception from both Tibetan Buddhist and Western scientific standpoints, and presents information using thangka imagery as well as text. See Appendix F for an exhibit flyer and photographs of the art.

Final Exhibition Project

As a culmination of their learning, and as a way to put into practice their developing intercultural communication skills, participants in the program will work alongside monks, nuns, and educators to build a new art and science exhibition. Like The World of Your Senses exhibit, it will contain visual imagery and text that represent both Tibetan Buddhist culture and Western viewpoints. The theme of the exhibition will be meditation and the brain, and it will explore exactly what the group will have been studying: Buddhist mediation, neuroscience, and the intersections therein (through both Buddhist and Western scientific lenses).

The group will split into six teams, and each team will work with two adult representatives of the Science for Monks program, one Tibetan and one American educator. Each team will develop a hands-on demonstration, a poster, an exhibit, or a presentation. This work will be done during the third and fourth weeks of the program. At the end of the fourth week, there will be an exhibit opening celebration at the Library of Tibetan Works and Archives, at which each group will present their work. The long-term goal is to tour this exhibition to several countries, similar to the trajectory of The World of Your Senses exhibition. Ideally, the tour will include exhibitions at the ExplOratorium and in at least several of the participants' communities.

Re-Entry Preparation and Post-Return

In the final week of the program, the group will take part in reflective exercises in preparation for the end of the program. They will write in journals and engage in discussions (small- and large-group) in which they will explore how they believe the program has affected

them. They will be prompted to think about ways in which their views may have changed around self-perception (ex. Who am I, and how do I define myself?), their home culture (ex. How has my view of my home culture changed or stayed the same?), and their intercultural skills (ex. Adaptability, communication skills, openness to difference, etc. within an intercultural setting). The intercultural concepts will be familiar to them, both through their pre-trip reading assignment and through discussions during the trip. The participants from the U.S. will also discuss the challenges that they anticipate during re-entry into their home culture. Their Leader will introduce the idea of "reverse culture shock" and talk about the potential for feeling isolated, misunderstood, out of place, or lonely.

When the program has ended, the entire group will be encouraged to stay in touch via telephone, email, chat sessions, and Skype. There will be a blog set up on which participant pictures will be posted and there will be a private chat room for the group. The intention is to create a forum for personal expression and discussion, one that will keep the collaborative spirit of the program alive once the group is off-site. Participants will have a built-in support network, and will be able to discuss their feelings and reflections on the trip and upon re-entering their "normal" lives.

STAFFING PLAN

The core staff of the program will consist two main Leaders, one from the U.S. and one from Tibet. The Leaders will be present at all times, except when participants are with homestay families. The Leaders will travel on excursions, take part in workshops and seminars, and lead all orientations. They will be the go-to adults if participants are experiencing personal problems or

challenges within the group. The Leaders will also inform the participants of program policies and make sure that the group adheres to the program rules, particularly around health and safety.

There will be an in-country logistical Coordinator who will arrange all in-country transportation, workshops and seminars, excursions, housing, food, and medical care. They will be the point of contact for the local lecturers and artisans who will engage with the program group.

The director of the Library of Tibetan Works and Archives, Geshe Lhakdor, will serve as Director, providing program guidance on big-picture decisions, and working directly with the Leaders and Coordinator in the event of an emergency. One of several Library staff members will accompany the group when translation is needed, on a rotating basis. There will also be a transportation specialist who will drive the group to excursions and homestay sites. Lastly, the educators and monastic participants of the Science for Monks program will work directly with the 24 youth participants for their collaborative final project, an exhibition on neuroscience, Tibetan Buddhism, and meditation.

PROGRAM MARKETING

The education abroad program will have a strong online presence. A dedicated website will articulate program goals, mission, logistics, FAQs, photographs, links to relevant films and articles on science and Buddhism, and firsthand accounts written by participants. The site will link to both to the Science for Monks website and to the ExplOratorium website.

In order to publicize the program, the marketing tools and strategies employed by both Science for Monks and the ExplOratorium will be utilized: the museum's Marketing Department will send out press releases, messages will be sent out to each site's email lists, and the program will use the ExplOratorium Facebook and Twitter accounts to advertise its presence. Additionally, the education abroad program will carve out a presence within the social networking realm, creating its own Facebook page and Twitter accounts. This strategy, in particular, will help to reach out directly to potential youth participants.

Program staff will conduct outreach in local communities, visiting schools and community centers, putting up flyers, distributing information within educators' networks, and attending education abroad fairs. In India, these efforts will focus on the Tibetan communities in and around Dharamsala; in the U.S., there will be an attempt to recruit students from a wide range of geographic regions. Program staff will also contact schools to see if the teachers have students who they wish to nominate for the program. Lastly, past participants will be asked on a voluntary basis to make brief presentations within their schools or communities, which will aid in recruitment.

STUDENT RECRUITMENT AND ADMISSIONS

Participant recruitment will focus on building a diverse, engaged team of 24 youth between the ages of 15 and 16. Half of the participants will come from Tibetan communities in and around Dharamsala, and half will be from the U.S. The staff will make a concerted effort to recruit at least 50% of the U.S. participants from underserved communities, representing

diversity in ethnicity, gender, sexual orientation, religion, socioeconomic background, and ability.

Partial and full scholarships will be made available to those with a demonstrated need. The program will seek financial support from private donors, grants, and from the Sager Foundation, which currently supports the Science for Monks program. Participants will also be encouraged to hold fundraisers in their communities to contribute to the program.

The application will provide information on the basic structure of the program and on the homestay experience. The process will require applicants to submit basic contact information and to write short essays on 1. Why they are seeking an intercultural experience, 2. Why they chose this program in particular, and 3. What they anticipate learning from this experience. A small pool of applicants will be interviewed, either over the phone or in-person. Successful applicants will be able to demonstrate maturity, enthusiasm for learning about another culture, and a desire to challenge themselves. Applicants will also be expected to furnish two letters of recommendation from teachers, mentors, coaches, or adult family friends.

LOGISTICS

Program logistics will be planned and implemented primarily by the program Coordinator, who will be on-site in Dharamsala months before the program begins. Homestay site visits will take place ahead of time, ensuring sufficient space for the participants as well as hygienic dining and toilet facilities. The homestay families will be trained so that they are prepared to meet the needs of the program participants, particularly around safe food and drinking water, but equally around their emotional needs. Prior to the homestays, all participants

and Leaders will stay at the Library of Tibetan Works and Archives, which has dormitory-style facilities. Throughout the trip, the program will provide all meals, and homestay families will receive a stipend to cover extra costs.

In-country transportation will be via taxi, tuk tuk, or public bus during the homestay – participants will be given money to cover this expense. A mini-bus will be rented for group excursions and airport pick-up and drop-off. Flights and visas for U.S. participants and staff will be arranged and paid for in advance by the program. U.S. participants will be encouraged to change money at the airport but will have sporadic access to ATMs and banks throughout the program.

HEALTH AND SAFETY PLAN

Program Preparation

Health and safety are of paramount importance in the education abroad program. As such, all program staff will receive training so that they are equipped to deal with emergencies, including having knowledge of medical facilities in and around Dharamsala, and receiving CPR and first aid certifications. In preparing for the program, Tibetan staff will visit all potential homestay families with two purposes in mind: an interview and a site evaluation. The interview will be conducted to make sure that the family will create an emotionally healthy environment for the participants; the site visit will ensure that the home is in line with program standards regarding amount of space, hygiene, and cleanliness. Families that are selected to participate will receive in-depth training on the health and safety precautions that U.S. participants must take, with a focus on safe food and drinking water, and on personal safety while traveling in the

community. They will also learn about "culture shock" and be prepared to offer support around it.

U.S. program participants will receive a pre-program orientation packet that they will be required to read. The documents will include CDC Health Information for Travelers to India, a timeline for immunizations, a reading on culture shock, and a comprehensive packing list (including recommended over-the-counter medications, proper footwear, and weather- and culturally-appropriate attire). Participants must get the required vaccinations and immunizations; if a student receives a scholarship, the program will cover the costs of preventative medical procedures and immunizations.

All participants will be required to fill out a medical questionnaire to alert the staff to any ongoing medical issues and mental health conditions. Medical disclosures will remain confidential; however, program staff will be made aware of relevant information. All 24 participants will be covered by a group insurance policy. The coverage will include emergency health insurance, evacuation, and repatriation.

Health and Safety During Program

Once participants arrive on-site, they will have a health and safety talk as a part of their orientation. For Tibetan participants, this part of the orientation will be less extensive, as they will already be acclimated to the local food, weather, and cultural norms. However, they will be made aware of the U.S. participants' potential challenges around culture shock, physical and emotional stress, personal safety, and food and water requirements. U.S. participants will discuss hygiene, safe drinking water, hydration, food safety, weather preparedness, local travel tips,

awareness of personal belongings, and appropriate dress. All participants will receive instruction as to who to contact if they are physically or emotionally unwell. They will be expected to carry a card at all times containing insurance information and emergency contact numbers and addresses for staff and local hospitals.

Staff will be expected to carry the same emergency contact information as students. They will be equipped with a first aid kit and a satellite phone capable of international calls. They will also carry emergency contact information for all program participants, and medical release forms so that participants can receive medical care in the event of an emergency.

CRISIS MANAGEMENT

Prevention

Crisis prevention is a necessary part of all education abroad programs and is incorporated into the program design. The pre-program information packet and the on-site orientation will both address crucial information on health and safety. All staff members will receive CPR and first aid certification, as well as training on how to deal with a crisis or emergency. Additionally, program Leaders will check in with participants each week on an individual basis to ensure that they feel safe and healthy. Lastly, participants will carry information cards with local hospital addresses and staff contact information in case they need assistance when they are not with the group.

Emergency Management

In the context of the program, an "emergency" constitutes any of the following: major medical event requiring hospitalization (including mental health emergencies) natural disaster, violent political uprising, arrest, assault, legal trouble, or other crisis as defined by the group Leader or staff person on-site. In the event of such crises, all major decisions will be made by the program Director; if unavailable, the authority to make a decision during an emergency will be given to the program Leaders. They will always carry a medical release form for each participant, enabling the Leaders to seek medical assistance on their behalf if necessary. For a summary of the chain of command and pre-planned lines of communication in the event of an emergency, see Appendix G.

BUDGET AND BUDGET NOTES

The budget for the education abroad program shows that the program is financially sustainable and has a net gain of approximately $9,800 per year. The notes below outline expense and revenue details that require further description or elaboration. The complete budget can be found in Appendix H.

Administrative Costs:

Office rental: An office in Dharamsala will be rented year-round in which the full-time Coordinator can work. When the program begins, the Leaders can also make use of this office space.

Marketing, Recruitment, Fundraising: The costs of these three components of program administration are reflected in the complete budget. Note that the salary of the Coordinator is accounted for separately, though the Coordinator is the person who will primarily carry out these tasks.

Salaries: The Coordinator is the one full-time employee, and carries out the bulk of the administrative tasks before, during, and after the program. The Director will work part-time throughout the year, collaborating with the Coordinator on big-picture decisions and projects. The two Leaders will work for a total of four months each while preparing for and implementing the program. The rest of the staff is hired as needed for one to five weeks. Note that the Coordinator receives benefits, estimated at approximately 25% of the annual salary.

Program Costs:

Transportation – International: Airfare is estimated at $1200 for 12 participants, one Leader, and the Coordinator.

Travel Insurance: Travel insurance will be purchased for all participants, the two Leaders, and the Coordinator.

Meals: Meal costs include all participants, the two Leaders, the Transportation Specialist, and a Translator.

Lodging: At the beginning and end of the program, all participants and both Leaders will stay at the Library of Tibetan Works and Archives for a total of 18 nights. During the homestay

period, lodging costs consist of $120 for each of the twelve homestay families as compensation for their efforts.

Emergency Fund: There is a contingency fund of $2000 in the event of an emergency. This is in addition to the use of credit cards, when necessary.

Revenue:

Fee: The fee per participant is $6200. Some of the participants will receive scholarships, which will be funded by individual donations and grants. The Coordinator will work during the year to raise money for the scholarship fund by soliciting donations, applying for grants, and making use of existing donor contacts within the ExplOratorium and Library of Tibetan Works and Archives communities.

EVALUATION

There are as many definitions of "evaluation" as there are short-term study abroad programs. For the purposes of this program, evaluation shall be defined as "a process used to determine whether the design and delivery of a program were effective and whether the proposed outcomes were met" (Caffarella, 1994, as cited in Douglah, 1998, p 2). In order to look critically at the program design and delivery, it is necessary to both examine the program features and participant learning.

Program Evaluation

All youth participants, staff, and host families will engage in a voluntary evaluation of the program. Elements to be analyzed include – in chronological order and where relevant – pre-program communication and support, accommodations, food, staffing, on-site orientation, readings and materials, seminars and workshops (content, delivery), excursions, homestays (setting of expectations, preparation, matching of students and families, etc.), and re-entry preparation. For instance, on the subject of staffing, participants and host families will be asked directed questions about the accessibility of the staff, the level of emotional and logistical support that they received from staff, the perceived level of staff preparedness and training, etc.

These features will be evaluated using various techniques. Program staff will conduct informal observation of the program delivery. Staff will have group and individual discussions throughout the program to gain participant and host family feedback, as well as formal interviews before and after the program. Lastly, participants and host families will complete written evaluations and surveys in the last week of the program, as well as a survey eight months after the program has concluded to gauge longer-term impacts that the program has had on their lives. From these evaluative measures, conclusions will be drawn about the program design, delivery, impact (on host families and community), and therefore about potential decisions to be made regarding programmatic changes.

Participant Evaluation

During the program orientation, all participants will be asked to reflect upon their communication skills, and their self-described identities, worldviews and cultures. Focused

journaling prompts such as these will be given both in orientation sessions and during the five weeks of the program. The journaling, alongside leader-facilitated discussions, will help participants to reflect upon their experience during the program and ultimately allow for guided self-reflection around how the program has impacted them.

One tool in this process will be the use of self-authored goals and objectives written at the start of the program, which will then be reexamined at its close so that participants can articulate their growth. Another tool will be the participant survey. This, along with the pre- and post-program interview, will give participants the opportunity to comment on both the program (structure, logistics, staffing, etc.) and their own personal growth. While the structural and content-related feedback will aid staff in making important improvements, the participant self-reflections will provide insight into the learning that has taken place. In the end, understanding the program's impact on participants, both from their point of view and that of the program staff, can aid in making crucial program design decisions, and in justifying the very presence of the program itself.

CONCLUSIONS

The education abroad program has the goal of increasing knowledge, skills and awareness of its participants in order to increase their intercultural competencies. The participants will be ushered through the Experiential Learning Cycle by dedicated practitioners. They will learn about Tibetan history, culture, Buddhism, and the fundamental concepts of neuroscience. They will have the opportunity to work and live together with peers from another culture, building strong relationships across cultural and geographic divides. In all of this, they

will explore the complications of living in a world with power differentials created by the marginalization of certain populations. This will help them to see why the Dalai Lama, the Library of Tibetan Archives, and others, have gone to great lengths to help preserve Tibetan culture, in part by insisting that keeping it contemporary is crucial to its survival (hence the directive regarding science education).

For the local homestay families in Dharamsala, the opportunity to host an intercultural mix of participants brings with it the potential for developing deep interpersonal relationships, and for increasing intercultural understanding and communication skills. All the while, the Tibetan Buddhist community will continue to pursue the Dalai Lama's directive of incorporating science into its education system – becoming increasingly self-sufficient in its efforts -- and will do so through hands-on activities and immersive experiences that are aligned with the pedagogical approaches and philosophical underpinnings of the monastic community.

For the ExplOratorium, the development of the new abroad program will further its mission of internationalization while staying grounded in experiential learning principles. It will stand as an example of a museum that has incorporated education abroad into its very fabric. Its partner, the Science for Monks program, will continue to educate its participants about science and Buddhist culture, while increasing the size and age range of its participant base, and maintaining its community-based and culturally-relevant approach.

Beyond all of these goals – of deep relationship building, strengthened community ties, cultural preservation, internationalization, personal development, skill building, and educational growth – the hope for the program is that the ultimate outcome will be to add to a growing body of young people who are open-minded and compassionate, embrace cultural difference and

diversity of thought, and face the growing challenges of today's world in a collaborative and inclusive manner.

At the same time, a new template for an education abroad program will be born, one that can inspire other cultural institutions to follow suit. It can serve as a model of immersive experiential education for museums that wish to expand their offerings across cultures and continents. Each institution will have the unique challenge of expanding the program design to incorporate its own ethos and vision. Thus, the ExplOratorium's new program will stand on its own as an original collaboration and contribution to a specialized group of individuals and communities across cultures and borders.

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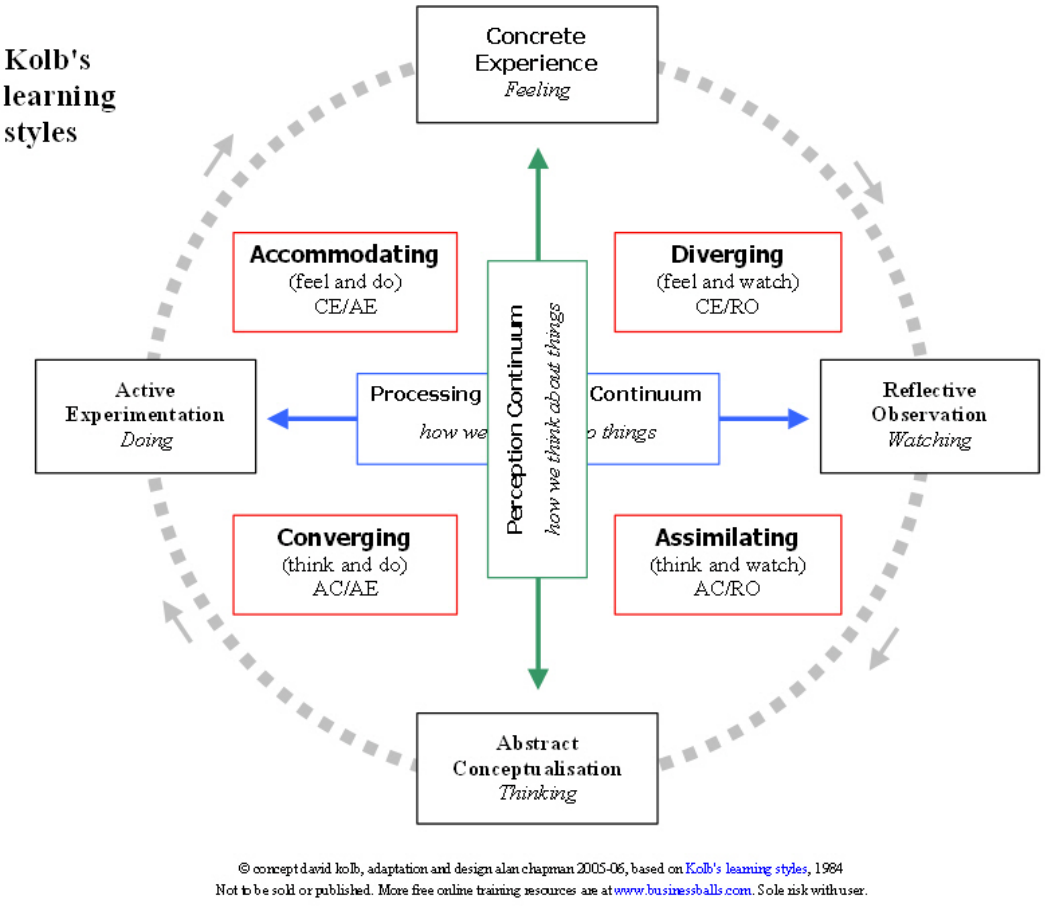
APPENDICES

Appendix A

Experiential Learning Cycle



(Kolb, 1984)

Appendix B

Intercultural Sensitivity Scale

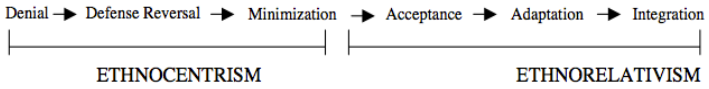


Fig. 1.

(Bennett, 1993, p. 424)

Appendix C

The History and Founding of the ExplOratorium

The ExplOratorium was the brainchild of Frank Oppenheimer, physicist, science teacher, writer, thinker and brother of J. Robert Oppenheimer, director of the Manhattan Project.

> "Considering the richness of his own life experiences, Frank was no typical science teacher. He put down the textbook and filled his classroom with the hands-on tools and materials that had become his trademark and that would ultimately lead him to create the ExplOratorium"
>
> (ExplOratorium, 2012)

Frank's unorthodox approach to science education was, in part, based on the idea that science and art were both crucial avenues for understanding the world around us, and that human perception was a natural bridge between the two disciplines (ExplOratorium, 2012). This philosophy and culture is just as present today as it was when the museum was founded in 1969.

Appendix D

A Short History of Tibet

For many centuries, the Himalayan region was an independent kingdom – as early as the 7th century, Tibet was considered to be a unified empire. Over the years, Britain, China, and Mongolia all vied for control over various regions of Tibet. In 1912, when the Qing dynasty collapsed, Chinese soldiers left the area, and the 13th Dalai Lama returned from India. In 1913, Tibet declared itself to be an independent republic; not all nations recognized this declaration of independence.

Returning to more recent history, Chinese soldiers again invaded Tibet in 1950. In 1951, Chinese officials forced Tibetan representatives to sign a treaty that would hand power over to China (BBC, 2012). In 1959, large-scale uprisings took place in Tibet. Many Tibetans were imprisoned or killed during this time period, particularly in 1959. That same year, the 14th Dalai Lama fled to India along with many Tibetans who continued to fight for Tibet's independence from outside the country. Today, China maintains control of Tibet; by some, the eastern regions of Tibet are considered to be part of China while the northern and central regions are considered to be the Tibet Autonomous Region (BBC, 2012).

Appendix E

Program Structure

Week One	General orientation, team-building, excursions, cultural orientations, language intro, group scavenger hunt
Week Two	Preparation for homestay, excursions, transportation to homestay, enter homestay
Week Three	Homestay, workshops, start final project, excursions, unstructured time with homestay family
Week Four	Homestay, project work, unstructured time with family, excursion with family, project presentation
Week Five	Re-enter small groups, homestay reflection, day trips, prepare to end program

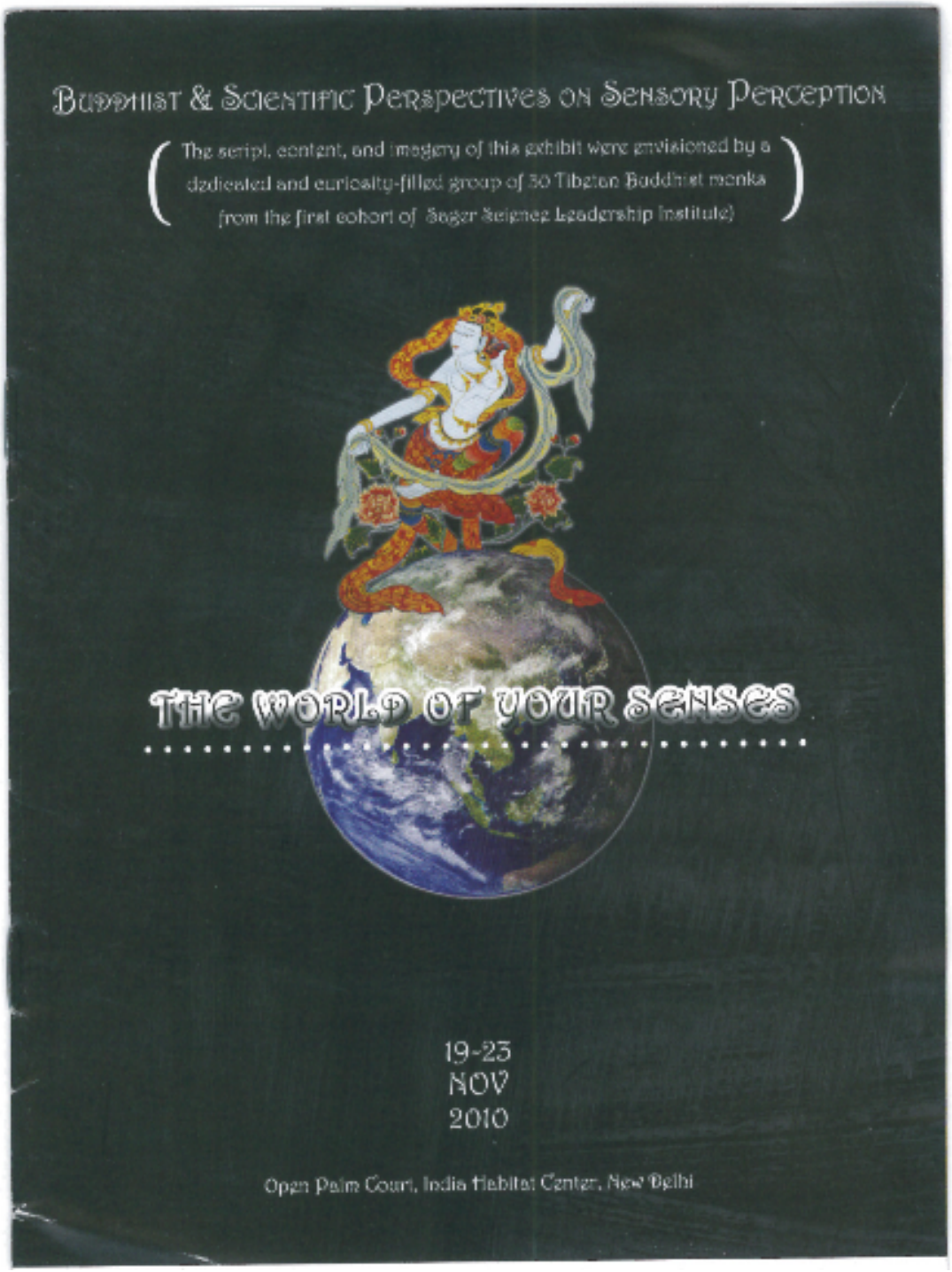
Program Timeline

Date	**Event**
September	Lead staff members are hired; program marketing efforts are initiated
October-November	Lead staff initiate planning; student recruitment takes place
December	Application deadline
December-January	Applications are reviewed; applicants are screened
February	Participants are selected; scholarships are awarded; homestay families are identified
February-June	Educators and workshop leaders are identified; excursions and workshops are selected and planned; homestay families are prepared
May-June	Pre-Program Orientation for participants

July-early August	Program takes place
August-September	Program debrief and evaluation

Appendix F

Exhibition Booklet



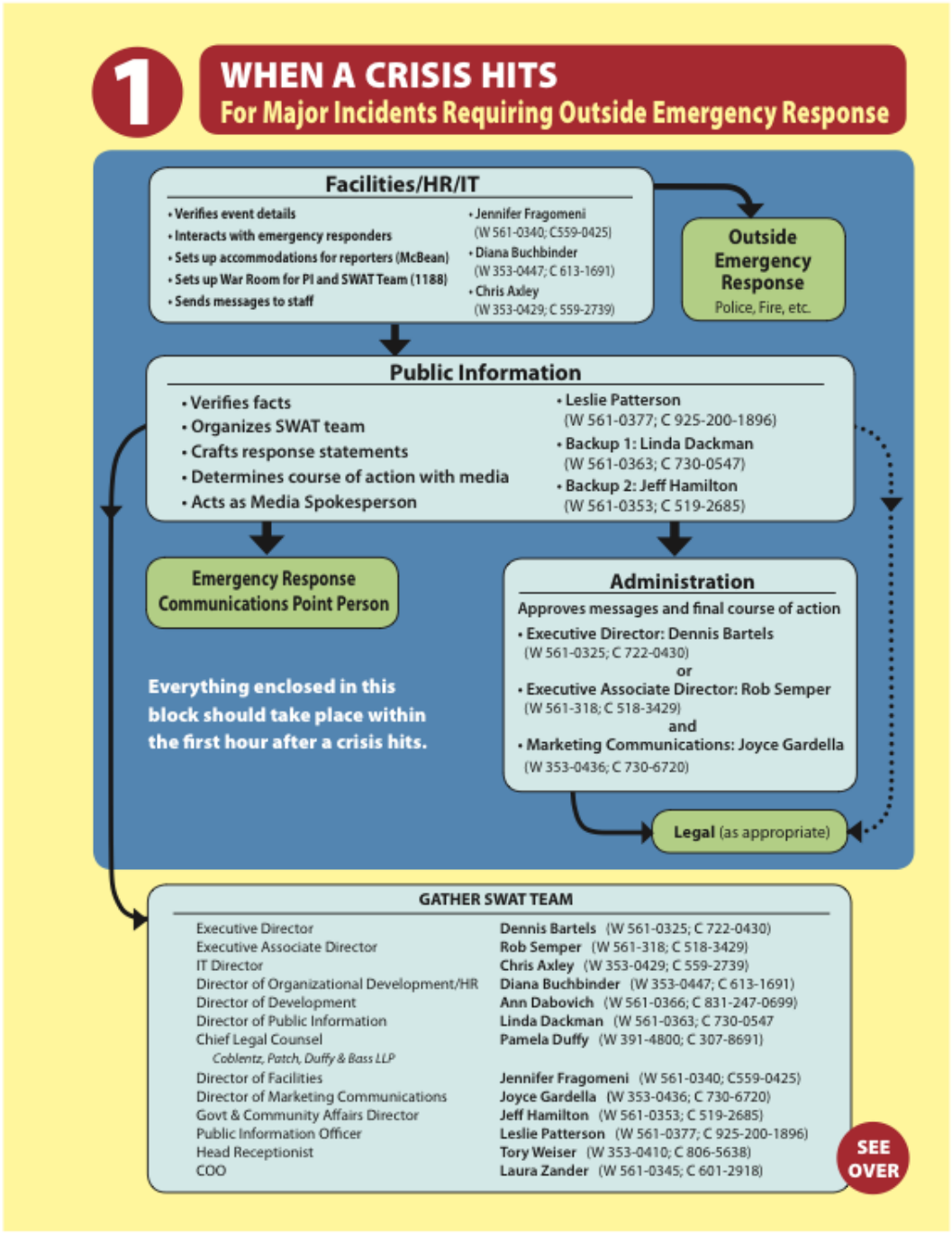
(The Library of Tibetan Works and Archives, 2010)

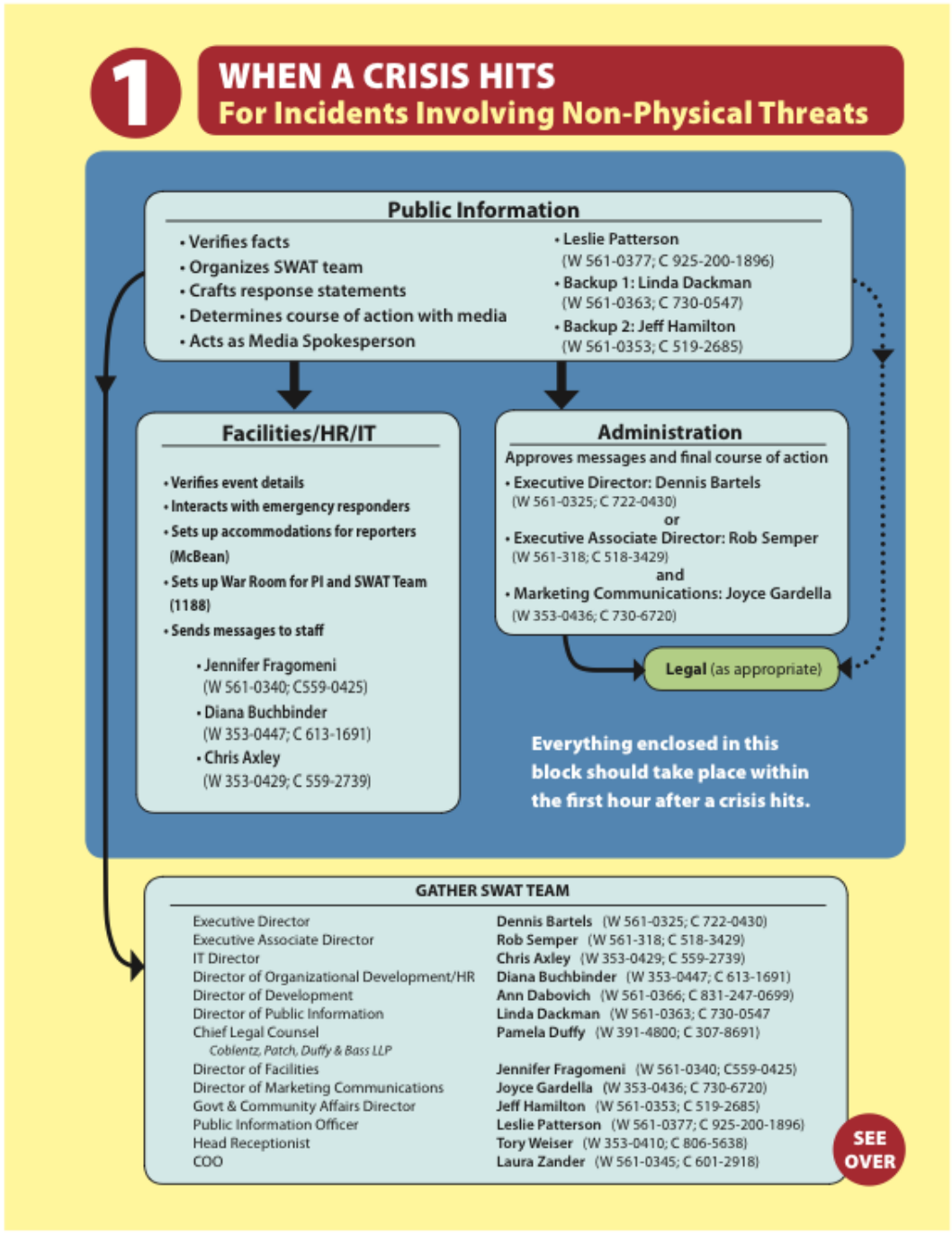
Appendix G

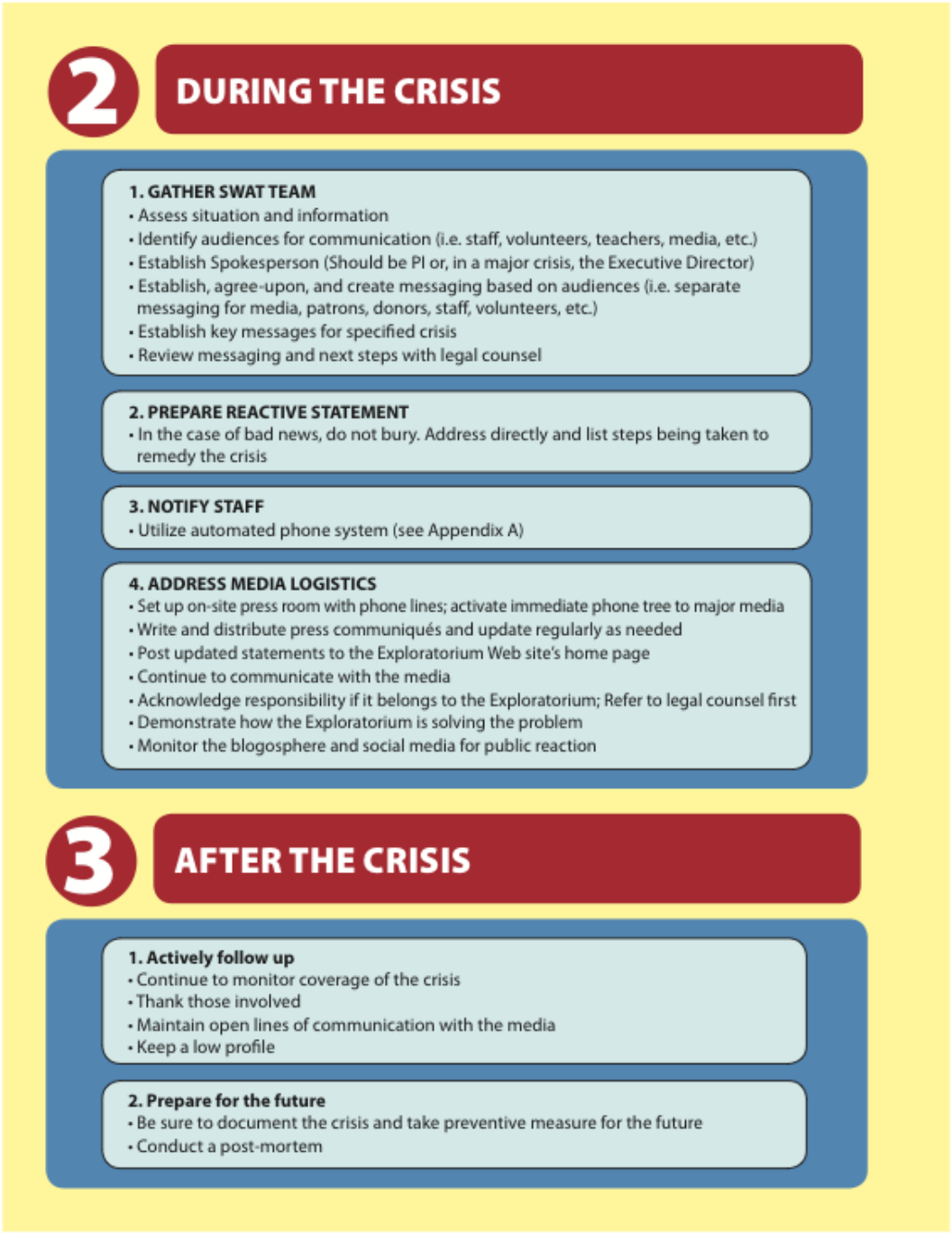
Emergency Protocol

1. On-site staff (most likely the group Leaders) assess the situation and provide care, seeking immediate medical care or emergency services as needed in order to ensure the health and safety of the group
    a. Staff will inform participants of crucial information in the moment or when it is safe to do so
2. Leaders will contact the program Director in Dharamsala and convey information
3. The Director (or another staff member in office, if the Director is unavailable) will contact the following parties, as needed:
    a. The U.S. Embassy, if necessary, especially in the event of a natural disaster or violent political turmoil
    b. The families of Tibetan participants
    c. The homestay host families
    d. The ExplOratorium via an emergency toll-free number with a 24-hour operator
    e. Members of the Indian press
4. The ExplOratorium will follow its emergency contact protocol (see below) with Senior Management contacting the media and the families of U.S. participants, unless the program Director elects to contact the participant families directly
5. Once the crisis is under control, the Leaders and Director will write up the details of the emergency in an incident report.

ExplOratorium Emergency Contact Protocol




1
WHEN A CRISIS HITS
For Incidents Involving Non-Physical Threats
Public Information
• Verifies facts
• Organizes SWAT team
• Crafts response statements
• Determines course of action with media
• Acts as Media Spokesperson
• Leslie Patterson
(W 561-0377; C 925-200-1896)
• Backup 1: Linda Dackman
(W 561-0363; C 730-0547)
• Backup 2: Jeff Hamilton
(W 561-0353; C 519-2685)
Facilities/HR/IT
• Verifies event details
• Interacts with emergency responders
• Sets up accommodations for reporters (McBean)
• Sets up War Room for PI and SWAT Team (1188)
• Sends messages to staff
• Jennifer Fragomeni
(W 561-0340; C559-0425)
• Diana Buchbinder
(W 353-0447; C 613-1691)
• Chris Axley
(W 353-0429; C 559-2739)
Administration
Approves messages and final course of action
• Executive Director: Dennis Bartels
(W 561-0325; C 722-0430)
or
• Executive Associate Director: Rob Semper
(W 561-318; C 518-3429)
and
• Marketing Communications: Joyce Gardella
(W 353-0436; C 730-6720)
Legal (as appropriate)
Everything enclosed in this block should take place within the first hour after a crisis hits.
GATHER SWAT TEAM
Executive Director — Dennis Bartels (W 561-0325; C 722-0430)
Executive Associate Director — Rob Semper (W 561-318; C 518-3429)
IT Director — Chris Axley (W 353-0429; C 559-2739)
Director of Organizational Development/HR — Diana Buchbinder (W 353-0447; C 613-1691)
Director of Development — Ann Dabovich (W 561-0366; C 831-247-0699)
Director of Public Information — Linda Dackman (W 561-0363; C 730-0547
Chief Legal Counsel — Pamela Duffy (W 391-4800; C 307-8691)
Coblentz, Patch, Duffy & Bass LLP
Director of Facilities — Jennifer Fragomeni (W 561-0340; C559-0425)
Director of Marketing Communications — Joyce Gardella (W 353-0436; C 730-6720)
Govt & Community Affairs Director — Jeff Hamilton (W 561-0353; C 519-2685)
Public Information Officer — Leslie Patterson (W 561-0377; C 925-200-1896)
Head Receptionist — Tory Weiser (W 353-0410; C 806-5638)
COO — Laura Zander (W 561-0345; C 601-2918)
SEE OVER



(ExplOratorium, 2012)

Appendix H

Budget Details

Expenses	Fixed Costs	Variable Costs	Quantity	Units	Total (USD)
Administrative Costs					
Office rental, utilities, etc.	$150.00		12	Per month	$1,800.00
Marketing		$1,000.00	1	For services delivered	$1,000.00
Recruitment		$1,500.00	1	For services delivered	$1,500.00
Fundraising (for scholarships)		$1,500.00	1	For services delivered	$1,500.00
Salaries	-	-	-	-	-
Director	$3,500.00		6	Per person / month	$21,000.00
Leader 1	$3,000.00		4	Per person / month	$12,000.00
Leader 2	$3,000.00		4	Per person / month	$12,000.00
Coordinator	$4,250.00		12	Per person / month	$51,000.00
Transportation Specialist	$200.00		5	Per person / week	$1,000.00
Translators	$200.00		2	Per person / week	$400.00
Activity Facilitators	$200.00		2	Per person / week	$400.00

TOTAL ADMINISTRATIVE COSTS					**$103,600.00**
Program Costs					
Transportation - In-Country		$250.00	1	Per group / summer	$250.00
Transportation - International		$1,200.00	14	Per group / person	$16,800.00
Travel Insurance	$810.00		1.25	Per group / month	$1,012.50
Medical Supplies	$100.00		1	Per summer	$100.00
Activity Supplies	$300.00		1	Per summer	$300.00
Office supplies	$200.00		1	Per summer	$200.00
Meals	$280.00		38	Per person / day	$10,640.00
Excursions - tickets, admission	$350.00		1	Per group / summer	$350.00
Lodging	-	-	-	-	-
Orientation and Re-Entry Prep Period	$65.00		18	Per group / night	$1,170.00
Excursions	$225.00		2	Per group / night	$450.00
Homestay	$120.00		18	Per group / night	$2,160.00
Emergency Fund	$2,000.00		1	Per summer	$2,000.00
TOTAL PROGRAM COSTS					**$35,432.50**
TOTAL EXPENSES					**$139,032.50**

Revenue	**Fixed Costs**	**Variable Costs**	**Quantity**	**Units**	**Total (USD)**
Fee	$6,200.00		24	Per Participant	$148,800.00
TOTAL REVENUE					**$148,800.00**
NET					**$9,767.50**

[i] The core collections are Seeing, Traits of Life, World of Matter, Listen, Mind, and Outdoor ExplOratorium (ExplOratorium, 2010, p. 12).

[ii] The museum is also a self-identified research and development organization. There are residencies, internships and volunteer opportunities for visiting scholars, artists and exhibit makers. This revolving door of thinkers allows the organization to serve as an idea laboratory, incubating ideas on a wide range of topics in the science, art and human perception arenas. The R&D also occurs in the two exhibit building workshops, which are constantly pioneering new exhibit designs, and analyzing the interactions that visitors have with these exhibit prototypes.

[iii] The mission of Science for Monks is "to develop the Leadership needed to grow and sustain science learning that engages Buddhism with science, and to disseminate the work of the monastics and their unique perspective on science and spirituality" (Science for Monks, 2012).

[iv] The words include Tibetan equivalents of "electromagnetism," "climate change," and "cloning" (Yee, 2009).

[v] Additional thoughts on this idea from renowned scholars Joplin and Dewey:
"Experience alone is insufficient to be called experiential education, and it is the reflection process which turns experience into experiential education" (Joplin, 1995, p. 13).

"Activity that is not checked by observation of what follows from it may be temporarily enjoyed. But intellectually it leads nowhere. It does not provide knowledge about the situations in which action occurs nor does it lead to clarification and expansion of ideas" (Dewey, 1997).

[vi] Kolb and Fry drew from and cited the writings and theories of Piaget, Dewey, Lewin, and others (Kolb, 1984, p. 3).

[vii] STEM refers to Science, Technology, Engineering, and Mathematics.

[viii] The ExplOratorium's journey of designing and implementing intercultural programs could be labeled as "internationalization," a slippery concept that educators have been grappling with for years. The concept of "internationalization" has been written about time and time again in the context of higher education, and has had countless definitions since the term first emerged. In thinking about internationalization as it pertains to the ExplOratorium, the goal was to find a broad yet applicable definition, one that isn't limited to universities or

government organizations. Hans de Wit and Jane Knight, noted scholars in the international education field, defined internationalization as follows: “The process by which education is developed into a more international direction” (Knight & de Wit, 1995, p. 16). Knight gives another applicable definition: “The process of integrating an international/intercultural dimension into the teaching, research and service functions of the institution (Knight, 1993, p. 21). In this capstone, these definitions are utilized as a basis for the discussion of the ExplOratorium’s internationalization efforts.

[ix] The ExplOratorium’s history of innovation started decades before its birth as a museum with the construction of the building itself. The building and surrounding structures were originally built for the 1915 Panama-Pacific International Exposition, which was held in San Francisco in the area now known as the Marina District. The intention was to celebrate the completion of the Panama Canal by showcasing international developments in fields such as Education, Social Economy and Transportation. Fast forward fifty-five years, and the buildings, then in disrepair, were remodeled and reborn as the ExplOratorium four years later (ExplOratorium, 2012).

[x] From his book on science and Buddhism, the Dalai Lama stated “I believe that spirituality and science are complementary but different investigative approaches with the same goal of seeking the truth…In this, there is much each may learn from the other, and together they may contribute to expanding the horizon of human knowledge and wisdom… I wish to emphasize to the millions of my fellow Buddhists worldwide the need to take science seriously and to accept its fundamental discoveries within their worldview.” (2005, p. 4).

[xi] The term “ethnocentric” can be defined as "assuming that the worldview of one's own culture is central to all reality" (Bennett, 1993, p. 10). Ethnocentrism essentially parallels “egocentrism.”

[xii] “’Ethnorelativism’ is the assumption that cultures can only be understood relative to one another and that particular behavior can only be understood within a cultural context. There is no absolute standard of rightness or ‘goodness’ that can be applied to cultural behavior. Cultural difference is neither good nor bad, it is just different, although some cultural behaviors may be more adaptive than others to particular environmental conditions” (Bennett, 1993, p. 26).

[xiii] While not every participant on the trip will reach the last stage of ethnorelativism, the goal is to see movement in each individual in that direction.

[xiv] In actuality, the idea of Tibetan Buddhists studying science came from a Tibetan Buddhist scholar, Gendün Chöphel, who published an open letter in the 1940s describing the potential for a dialogue engaging both scientific ideas and Tibetan Buddhist philosophy (Dalai Lama, 2005, p. 2).

[xv] “A thangka is a complicated, composite three-dimensional object consisting of: a picture panel which is painted or embroidered, a textile mounting; and one or more of the following: a silk cover, leather corners, wooden dowels at the top and bottom and metal or wooden decorative knobs on the bottom dowel…The vast majority of… thangkas…have taken shape as a scientific arrangement of content, colour and proportion, all of which follow a prescribed set of rules” (Buddha Net, 2012).

[xvi] This field, in general terms, is known as affective neuroscience or contemplative science. Dr Philippe Goldin is a pioneer in this area. As both a clinical psychologist and neuroscientist, he has long been interested in how meditation physically affects the brain. Goldin and others have used encouraged the use of meditation to help treat, or prevent in some cases, social phobia, generalized anxiety disorder, stress reduction, pain management, depressive symptoms, and more. Goldin advocates for “[taking] incredible…technology that the West has to offer (to go under the skull non-invasively and image the brain while it is doing what it does) and ancient wisdom traditions of methods that have been used for 3,000 years…to actually identify and begin to modulate mental patterns…can we integrate this?” (Goldin, 2008).