When Understanding Follows "Experiencing": A Report from Research in the Field

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I. What constitutes a flat world?

According to popular culture, "flat" implies that elevated levels of connectivity equalizes access and levels the playing field for everyone around the world [1]. This connectivity helps bridge cultural divides and brings together diverse people spread - across the continents. However, a large part of the world is still out of touch from this high connectivity loop and consequently the world is far from flat. It is one thing to have information about a foreign cultures and something entirely different to understand enough to participate in it. As Friedman, agrees that technology alone is not the solution in the creation of the flatness.

Academia is very similar in its lack of flatness. The academic world as we know it represents many different schools of thought. Each of these comes with its own paradigms [2], philosophies, traditions and ideological bent. The differences become apparent when one works to bring together or participate in a multi-disciplinary endeavor. It is not possible for all members of the multi-disciplinary team to become experts in each others field. The lines around the territory of each discipline are very well defined and transgression may not be viewed kindly. In most cases the situation is dealt with by negotiating boundaries, working on different pieces and assembling it all together in the later stages of the work. Often the trust required to truly collaborate does not usually emerge as time and expediency become the drivers. True multi-disciplinary collaborations are exceptions to the norms in academia [3, 4].

In the sections that follow two case-studies from a multi-disciplinary, distributed project are presented. They describe the trial and tribulations encountered by the research team, and some innovations with unintended consequences; which have led to insights and the opening of new avenues on design teaching and learning and on building capacity across cultures and disciplines.

II. Co-DiViNE:

Co-DiViNE stands for Community Digital Vision and Voice Narrative Enactment. It is a multi-disciplinary project aimed at creating sustainable prosperity in chronically poor communities. Currently the project has a field site in the south of India situated near

one of the two India universities scholars from Stanford University are collaborating with. The research team is comprised of senior researchers from Stanford and from the two Indian universities, and two research interns with graduate degrees from the two Indian universities. Some of the disciplinary fields represented in this project include: design, economics, operations research, folk culture studies, cognitive sciences, psychology and anthropology.

II.A An overview of Co-DiViNE:

Studies of communities living in chronic poverty [5, 6] show that most are still predominantly oral [7] in that they do not have an external symbolic system [8]. The ESS is seen as one of the main factors in the development of an impersonal exchange system and one of the primary foundations in the advent of institutions that are responsible for economic prosperity in the western cultures [9]. Simply put, it is the availability of a suitable medium to externalize existing knowledge such that it can be archived, shared, reflected on and revised that makes modern economies prosperous. One of the research premises for pursuing the Co-DiViNE project is that the absence of ESS is a confounding factor that keeps the oral cultures chronically poor. In accordance with this understanding the Co-DiViNE project is conceived to explore approaches for introducing visual literacy as an ESS in oral cultures to accelerate the advancement of an indigenously created, sustainable form of prosperity in chronically poor, rural communities. The success of Co-DiViNE project offers a possibility for creating prosperity within a much shorter time of a few years as compared to the experience with the introduction of traditional literacy which takes shape over the generational time frame and has led to the brain drain from the oral communities and created mass urbanization.

Co-DiViNE pursues a new solution and a new model of implementation for addressing chronic poverty. Since poor communities are predominantly oral, their mode of knowledge transfer is often through enactment. The research team's visit with a local NGO showed that the use and adoption of video and audio technologies, particularly cell phones, has been relatively easy for these communities. The Co-DiViNE project has been designed to focus on the use of visual media to help people in these communities externalize their knowledge. Instead of learning the syntax and semantics of written language, the communities will be able to use a media more akin to their current form of communication and may then evolve/develop their own indigenous "Visual Literacy". This form of literacy may lead to the creation of norms and institutions that will be rooted in indigenous cultural values, and will thereby be capable of fostering a more sustainable foundation for the local prosperity.

The Co-DiViNE method consists of teaching the oral communities to use visual technology tools. They then use the technology to capture their self-narratives. These narratives are then shared within the community giving the people the capability to voice their opinions and discuss the issues that affect the community as a whole. It is hoped that such discussions will facilitate knowledge sharing within the community and also lead to the emergence of community aspirations. These aspirations can then be fulfilled by working with local universities and NGO's. This helps restore the responsibility for envisioning the future and the creation of prosperity to the

community rather than the outsiders, such as government, donors, academics, intermediaries and other interest groups and organizations.

Figure 1: Co-DiViNE Method

In the past it has been observed that in most cases, progress is made as long as the research team is in the field and working with the oral communities [10]. In such cases, the ideas are brought in by the research team and the village community acts on these ideas in response to the visitors rather than from their intrinsic sense of aspirations and motivations. The villagers have little or no understanding of the projects or resulting ramifications beyond the scope of interactions with visitors. The ideas are hence not indigenous and lose momentum once the research teams exit the field. To avoid this "novelty" effect in the current Co-DiViNE project, it was decided that student-interns be employed as an interface between the research community and the oral community. These students are graduates from the local university, have a master's degree in rural development and have much experience in working with the local village communities. It is envisioned that these students will live in the village for ten months. A new batch of students will take up this position every year, thereby ensuring a sustained presence in the village.

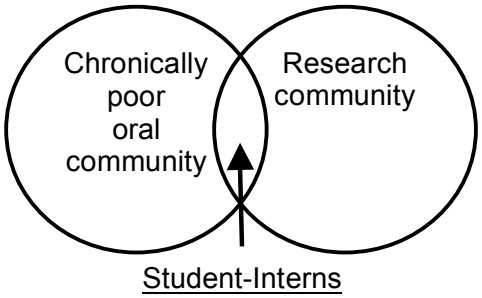

Figure 2: Implementation Model

It is anticipated that this will help overcome the novelty effect and ensure the indigenousness of the ideas in such a way that the change would become self-initiated and self-sustained. Since the drive for the change will come from the community, this design has hope of surviving and having a long lasting impact.

Senior research team collectively decided on the criteria for the selection of the student-interns. It was decide that the student-interns will be brought on board after the senior research team had an opportunity to understand the project goals and the nature of collaboration required.

II.B Idea of a multi-disciplinary collaboration:

The first task in this bold project was to define what kind of research collaboration was being sought. Since the vision of the project is so broad, it was understood that the project timeline was going to be very long and that it could easily become a multi-generational project. Given this understanding, it was agreed that the project should be based on a trust-based collaboration [11]. The action proposed to achieve this was as follows:

- ***Building a solid foundation of shared concepts and vocabulary:*** Since representatives of different disciplines would be working together, it was imperative to understand the context of the different paradigms. The creation of a shared context was attempted by collecting seminal literature from the different fields and distributing these to all the members of the senior research team. The aim was to create a common pool of vocabulary and concepts for the team. This was then followed up by compiling all the pertinent journal articles and the book chapters as the points of departure from the various fields.
- ***Imagining something new together:*** Based on the collective foundation of literature, concepts and vocabulary, the team could work together to create something new together. Each member of the team could contribute from their strengths and enrich the shared vision.
- ***Sustaining individual research interests:*** This would entail the creation of incentive for every member of the research team to keep them motivated and focused. It would also make them equal partners and stakeholders in the collaboration.

III. Case Study 1: Training of student-interns

The Project was launched through a workshop in September 2005. Efforts were made to build consensus amongst the senior researchers by trying to articulate goals and milestones. Simultaneously the selection criteria for student-interns were being developed. By October 2005, two student-interns were selected who needed to be trained to become the facilitators of Co-DiViNE at the field site.

The aim of the training was threefold:

- ***Technology sharing:*** The student-interns must first become proficient in the use of technology. In addition they must also have the skill to train the village community in the use of the latest visual technology.

- ***Theoretical understanding of the methodology:*** Since these interns would be the persons carrying out the methodology, they must have a basic understanding of why and how the method had been created. For this purpose a basic understanding of some key concepts was deemed necessary.
- ***Ethics:*** It was important for the student-interns to believe that the learning in this project would be a two-way process. Being a research project, the aim was to learn from the oral communities while sharing what we knew about prosperity with them. It was imperative that they do not create any hierarchies in the village.

The level of proficiency required in understanding the Co-DiViNE methodology and its implementation was very high. Since the student-interns would be in the field and face challenges where they would have to react spontaneously, the need was for the students to have an *embodied sense* of the methodology so that they could react instinctively based on the method.

III.A Challenges in training:

The training of the two interns was initially done remotely from Stanford. It was done by sending a collection of papers to promote shared vocabulary for discussion. Documents describing the Co-DiViNE methods were also sent. Discussion (starting October 15th till date) between the two interns and this paper's first author happened over e-mail and over conference calls which were scheduled and conducted twice a week.

Most of the e-mail and phone-call discussions were focused on negotiating the meanings of words from the various disciplines to which the student-interns had no prior exposure. Finding analogies and metaphors that could generate shared understanding was another preoccupation. These challenges made progress towards collective understanding of the project very slow and most discussions started confused and ended the same way. The unevenness of the world became apparent at this point with respect to the way technology was perceived and used. One example of this was that the student-interns due to limited access checked e-mail only once a day. Since the time difference between India and Stanford is 12.5 hrs, one round of e-mail communication took two days.

III.B An emergence:

In December 2005, there was an opportunity for on-site training. The training started with a literature overview but failed to move beyond the words to the level of clarity required. At that point a new approach was tried. The students were asked to go through the whole Co-DiViNE method. They were given a video camera to explore its functionality and then were asked to create their own self-narratives. These narratives would then be shared within the research community.

Both the student interns 'shifted' as they were *experiencing* the method. These shifts greatly increased the student intern's capacity to understand and implement the Co-DiViNE method. The following marked changes were observed:

- ***A shift from instruction seeking behavior to collaborative behavior:*** Previously most of the questions from the student-interns had been to get step by step

instructions on how to conduct the project. The questions asked were "*What do you want us to do?*" and "*How do you want us to do (this?)*". This line of questioning was replaced by an articulation of their imagination on how the method would be received by the communities and what alterations would improve the method.

- ***Confidence in the method and its effectiveness:*** Having gone through the experiencing of the method personally, the student-interns could feel an embodied and internalized sense of concepts that were inherent in the methodology. Consequently they had a direct experience and felt sense [12] of the challenges in speaking to a camera and also the anxiety in sharing it with a larger community. The responsibility of the task of implementing this method in the field and subjecting the village community to it became very apparent.
- ***Experience precedes learning:*** The student-interns used their embodied sense from experiencing to understand the literature. They were using the concepts and vocabulary to explain their experiences to themselves. Their access to the embodied sense of experiencing became the shared context and the anchor through which the different concepts could be understood.

IV. Case Study 2: Beginning of a collaboration

IV.A Challenges with collaboration among senior researchers:

The team of senior research scholars first met in person in September 2005 to discuss the literature they had been reviewing. The discussion stayed very theoretical with every expert unwilling to step out of their areas of comfort. The problem being tackled by Co-DiViNE was ambiguous and the methodology novel and untested all of which caused much discomfort amongst the experts. There was no shared context to anchor the discussion and much of the discussion was often ineffective because of semantic confusion. One year had passed and progress made towards shared understanding and collaboration was marginal.

In an attempt to accelerate the creation of a context for shared understanding, the learning from the experience with the training of student-interns was used to create a similar experience for the senior researchers. A prototyping of the Co-DiViNE method with an oral community was suggested as a way of 'experiencing' the methodology for one of the senior researcher who was overseeing the field-work. The prototype was conducted in 12 days (Dec 10th to 22nd, 2006) in Jallipatti Village. Over 20 persons from the village were trained in the use of visual technology and a total of 5 narratives were collected. These were then shown to the community in a self-reflection session which lasted four hours.

The senior researchers were skeptical of the success of the self-reflection session given that their previous experience suggested that typically, chronically poor communities needed mediation to get a conversation going. In this case however, during the prototyping session a cacophony erupted as the narratives were aired. The village elders stepped in to facilitate a more orderly discussion. Despite the senior researcher being present, the community faced up to its own issues without any mediation, articulating it as a collective problem and also arriving at a solution.

IV.B The emergence:

The prototyping of the self-reflection session by the senior researcher turned out to be the proof of concept required by the senior research team. Feeling confident that the method could work, the discussion shifted from theory to the experience itself. An outstanding example of resolution of semantic confusion was witnessed when two of the researchers arrived at a shared understanding of the term 'prototype'.

The confusion started when the professors of folk culture studies said that they associated 'prototype' with archetype and stereotype. However, by using the shared experience as a reference, the following clarity was found. What in design parlance is 'prototyping' is in performance vocabulary 'rehearsal'. When designers say they have arrived at a 'functional prototype', it is the same as 'dress rehearsal'. Following this stage in both disciplines, the next step is 'production'.

This clarity was the beginning of a resolution to compile a glossary of terms which would serve as the starting point for the creation of a shared context and understanding that the project had hoped for as the foundation in its original conception.

V. Beginning of a research enquiry:

The main takeaway from the two cases described above is that there is a potential for advancing design capacity building by building on how experiencing can catalyze understanding. This juxtaposition of experience and learning may be of great advantage when working to share knowledge and meaning across disciplines and cultures.

The world and academia are far from flat. The beauty lies in them being so. Multiple perspectives whether cultural or methodological give new insights and offer multiple ways of achieving desired results. The aim then is not to flatten the world but help learners (students and researchers) navigate the unevenness by accelerating the creation of shared context and meaning. Differences are advantage, as researchers help find methods for realizing this vast untapped potential for creating an undivided world - rather than a flatter one [13, 14].

"Experiencing" before understanding is a paradigm which is worth looking into as a potential solution for advancing design learning and pedagogy. This idea is not new and has been explored in the work of John Dewey. He suggests that learning should have two components: *active doing* and *undergoing*. 'Active doing' implies creating or doing an action. About 'undergoing' Dewey writes, "the esthetic or undergoing phase of experience is receptive. It involves surrender."

When designers prototype, or build, they fulfill the 'action doing' component part of Dewey's vision. The other part is however seldom done or studied. Allowing the prototype to act on the designer is what it requires. Such an encounter leads to tacit capacity building in the designer. This manifests as ability to learn from embodiment of experiencing, ability to truly collaborate within the deeper and richer context imbued with a shared sense of aesthetics. The two case studies above show how the designer can be acted upon by the design and how they change as a result of it. Introducing this component into design curricula will help create designers who can not only appreciate the unevenness of this world but through experiencing rise beyond it and create an undivided world through collaborations [15].

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VIII. Authors' Biographies

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