Achieving participatory development communication through 3D model building in Timor-Leste

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Achieving participatory development communication through 3D model building in Timor-Leste

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Participatory development is now widely accepted in principle. In practice, however, institutional obstacles, resource constraints and perceived capacity weaknesses conspire to undermine genuine community participation in project design, implementation and evaluation. The question is no longer whether communities should participate in development initiatives but how. In this paper I draw on recent exploratory research in Timor-Leste to discuss the potential of structured 3D model building as a tool for promoting substantive community engagement in development projects.

Participatory development communication through serious play

Limited uptake of development initiatives has recently been linked to over-reliance on ‘expert’ knowledge and inadequate appreciation of local development priorities (see Smucker et al. 2007:387, Tuft and Mefalopulos 2009:18). Meanwhile, increasing emphasis on the need for local participation in development projects has generated new interest in how development researchers and practitioners alike can better engage the communities in which they work. Participatory development communication (PDC) offers one approach to enhancing stakeholder engagement at all stages of the project cycle. Contrasting this approach with conventional development models, advocates of PDC contend that sustainable development results not from hierarchical, top-down data extraction or transmission of knowledge, but rather horizontal processes of knowledge exchange (see Figueroa et al. 2002, Mefalopulos 2008, Quarry and Ramírez 2009).

While few would contest the objectives of PDC outright, the nexus between principles and practice is considerably more disputed. Insufficient skills and resources to maintain substantive community engagement over a protracted period is certainly par of the problem. PDC does not come cheap. However, commonly relied on methods of communication must also be interrogated. For instance, the literature on PDC emphasises the importance of dialogue — of co-determining the content and parameters of a conversation in situ (Bessette 2004, Hamelin 2002). By contrast, survey, interview and focus group questions contain de facto terms of reference that inevitably open up particular avenues of discussion while closing off others. Similarly, the standardised language (dare I say jargon) commonly used to discuss highly complex development challenges is hardly conducive to identifying fundamental differences between how development ‘experts’ and local communities perceive, explain, and rationalise particular behaviours or outcomes. Prescriptive language is a common condition of the power imbalance characteristic of development work. It is not, however, inescapable.

A growing body of literature demonstrates that serious play can create opportunities for knowledge exchange about complex issues while eschewing — or even upending — conventional power relations (Andersen 2009, Gauntlett 2007, Statler et al. 2011). Briefly, serious play, distinct from general play, is a goal-oriented activity that provides structured space for reflection and critical analysis. It corresponds strongly with Freire’s idea of ‘conscientisation’: an act of critical reflection through experiential learning and dialogue (Thomas 1994:51). Crucially for the pursuit of PDC, serious play invokes conscious reflection on the activity itself in a way that directly connects the play space to real life issues and concerns. The 3D model building technique, discussed at some length below, offers just one example of how serious play might be harnessed to achieve PDC objectives.

3D model building in Timor-Leste

The remainder of this paper will examine an exploratory study on the potential of 3D model building as process for structuring grounded dialogue in a development context. This research was conducted alongside the Australian Centre for International Agricultural Research (ACIAR) funded project ‘Enhancing smallholder cattle production in East Timor’ during the initial site selection and needs assessment phase of this initiative. Research participants included members of the local research team as well as community leaders and farmers in one village under consideration as a possible site for project implementation.

The 3D model building process piloted in Timor-Leste was significantly informed by the LEGO® SERIOUS PLAY® methodology. Originally developed in 1998 to help overcome stagnation within the Lego Group itself, LEGO SERIOUS PLAY consists of a progressive sequence of model building exercises that encourage participants to think abstractly about complex problems using the iconic, plastic Lego bricks (Roos et al. 2004). After each building challenge, participants share the story or meaning of their model with others sitting around the table, creating opportunities for self-expression and cooperative learning. In other words, this distinctive approach to communication is purposefully designed to (a) allow time and space for individual reflection, and (b) provide opportunities for all participants to express their thoughts on an equal footing.

The immediate objective of adapting LEGO SERIOUS PLAY for use in a rural development context was to design a research communication framework that would empower participants to express their experiences...
and aspirations in their own terms. Research in Timor-Leste started from the premise that different project stakeholders (i.e. the local research team, community leaders, livestock farmers) hold discrete types of expertise. In other words, it anticipated that knowledge about persistent obstacles to rural farmers' achieving a more sustainable livelihood would be varied and dispersed. The research design also recognised that many people — particularly those with low literacy skills or minimal formal education — may not be readily able to articulate this expertise. The sequence of 3D model building challenges purposefully designed for this research were intended to create a context in which participants could analyse — and effectively communicate to others — how they understand their own lived experience, aspirations and local development challenges.

Exploratory fieldwork using 3D model building as a situation analysis tool was conducted in Timor-Leste from 4–12 September 2012. Members of the local research team affiliated with the national university and the Ministry of Agriculture participated in separate model building sessions held in Dili. Two additional sessions were conducted with community leaders and farmers in one rural village in Liquiça district. Each session lasted approximately three and a half hours and included warm up exercises (intended to familiarise participants with the bricks) as well as topical building challenges designed to provoke discussion about livestock management practices.

There is not space here to discuss the sequence of building challenges at length; this process is described in richer detail elsewhere.1 Briefly, the topical building challenges used with each group of participants followed a similar pattern, although the exact wording differed slightly in accordance with each group's defined role. First, participants were asked to build a model representing their own role or context with regard to the ACIAR project, either as a researcher, community leader or farmer. Next, they built a model or models identifying challenges associated with current livestock management practice. Participants then built models to represent what a more desirable situation might look like. Time permitting, some groups were also asked to build an additional model to identify the resources they would need in order to achieve the situation they had already identified as desirable.

Some initial findings

The findings that can be drawn from such a small, exploratory study are somewhat limited. Even so, the results of this research indicate that 3D model building has considerable potential as a method for achieving the sort of meaningful, substantive engagement envisioned by PDC.

The primary objective of this project was to design a research communication framework that would empower participants to express their experiences and aspirations in their own terms. One clear strength of the 3D model building process employed here was that participants were never asked direct questions that could be interpreted prescriptively. Instead, they were encouraged to respond to broad challenges such as, 'build a model representing current cattle farming practices' or 'build a model of what you hope to achieve in the future'. The open endedness of the challenges allowed participants to respond in very different ways indicative of their own experience and point of view.

For instance, the challenges identified with current livestock management practices varied considerably between stakeholder groups. The university researchers pointed to lack of market access and 'traditional culture' as considerable obstacles, while field researchers from the Ministry of Agriculture were more concerned about animal health. Community leaders, meanwhile, discussed local capacity weakness and lack of basic infrastructure. Farmers, like the field researchers, identified food and water shortages as major challenges to livestock management; however, they often situated these challenges within a particular social context. From the farmers' perspective, the problem of inadequate food and water supplies for their animals is not only an issue of scarcity but also the management of complex social relationships.

Another advantage of the 3D model building process discussed here was that it afforded participants time to work through their responses before they were asked to speak. Quiet periods of individual model building and an opportunity for each participant to explain what he or she had built always preceded group discussion. Not only did this process largely prevent one or two individuals from dominating the conversation, the physical presence of the model ensured that each participant had something to talk about. The model also served as a prop that could be used to demonstrate complex relationships or nuanced information that participants struggled to express in words alone.

Interestingly, preliminary feedback from the farmers indicates that they found this technique more meaningful than the traditional participatory situation analysis activities that they had taken part in the previous day. When asked whether they liked building and discussing the models, the response was unequivocally positive. Several farmers said that the models made it easier to understand their problems, describing the other situation analysis activities as 'only theory'. From a researcher perspective, the kinaesthetic activity of making something concrete also appeared to help the farmers imagine and visualise how things might be different, something they had previously struggled with.

The process was not only popular with the farmers, however. The field researchers completed the 3D model building challenges before setting off to conduct a situation analysis with farmers, and said that they found it useful for recognising their own preconceptions. One field researcher pointed out that he would now be alert to these expectations when he goes out to the field, rather than taking them for granted. Another field researcher commented that visualising a situation through the models 'helped to unravel the problems'. Without jumping to the conclusion that this particular technique is always appropriate, the initial participant feedback suggests that
3D model building could be a beneficial communication tool in some contexts.

**Potential and limitations of 3D model building**

Knowledge is both constructed and partial. Likewise, the methods that we use to conduct research are complicit in the data — and knowledge — that we produce. This is as true of research conducted according to the principles of PDC as it is of research conducted in any other way. The difference, however, lies in the nature of the partiality. Whose views are given preference? Why? How?

In designing the 3D model building process described above, I attempted to privilege the knowledge, experience and understanding of a select group of project stakeholders. The results of this admittedly limited exploratory study exceeded even my own expectations. While participants from different stakeholder groups often identified similar problems and possible solutions, the ways in which they described and contextualised these issues varied considerably. This raises the prospect that how development initiatives are implemented might, in this instance at least, be as important as the solution itself.

Moreover, participants sometimes raised issues that I might not have thought to ask about directly. My own knowledge of livestock management practices is quite limited. However, one strength of this approach was that I did not need to be an expert myself in order to successfully prompt participants to share their own expertise.

Applying this method in the field also exposed several weaknesses. First, 3D model building takes time. This point cannot be overemphasised. The process that I developed was almost equal parts reflective, individual building and active conversation. After factoring in about forty minutes for warm up exercises, a three and a half hour session allowed for approximately 75–90 minutes of discussion. With three out of the four groups (ranging in size from four to eight participants) I could have easily used another two hours. The fourth group (university researchers) only had two participants, so each individual could claim a larger share of the 90 minute discussion.

Standard applications of LEGO SERIOUS PLAY take a minimum of four hours and can last for up to two full days. It is not difficult to imagine how a larger investment of time than was available for this study could produce greater returns in terms of data. None of the participants who took part in this research had prior experience with Lego bricks and all of them initially struggled to work out how the pieces fit together, highlighting the importance of allowing plenty of time for warm up exercises. However, they soon caught on — the farmers more quickly, perhaps, than the researchers. By the end of each session participants had started to untangle highly complex realities. What insights were missed by stopping prematurely, we will never know.

Second, documentation and data collection proved particularly tricky. The 3D model building method described above is not like a typical interview in any number of ways, not least because of the existence of the model. During discussion, participants invariably point to or manipulate their models to emphasise particular locales of meaning. Data collection, therefore, entails not only audio recording and intense note taking of what participants are saying, but also careful photographic documentation of the models themselves. The task of rigorously linking the textual, audio and visual evidence is also challenging, and something that I am still struggling to perfect. However, cutting corners here would largely defeat the purpose of the exercise. While 3D model building did seem to have some intrinsic value to the participants in that it helped them to better understand their own realities, PDC implies that this knowledge gets communicated up the project ladder. Onward communication requires full and reliable documentation.

Finally, the bricks themselves represent an ethical problem that turned out not to be a problem at all. Before conducting field research, it had been widely suggested that some participants might take offence at being asked 'to play with toys'. Several colleagues also noted that the mini figures are yellow skinned, and suggested that they might not be appropriate in places where people have darker skin tones. Acutely aware of these criticisms, I landed in Dili hypersensitive to the possible cultural overttones of the bricks. If necessary, I was prepared to locally source whatever modelling materials I could find. None of the participants in this research took issue with the bricks; indeed, most seemed to thoroughly enjoy themselves. In this particular context at least, the 'ethnicity' of the yellow mini figures proved similarly inconsequential. However, these concerns cannot be written-off entirely and remain valid when taking Lego bricks into new contexts and communities.

**Conclusion**

This exploratory study in Timor-Leste has gone some way toward confirming my suspicion that 3D model building has considerable potential for achieving PDC in a rural development context. Much work remains to be done, however, and this method will not be suitable to all projects. Development researchers and the communities they work with are often time poor and the temptation to cut back on the amount of time allocated to development research activities can be strong. With further research using this 3D model building method, I hope to demonstrate more clearly than I am able to here that the quality of PDC achievable using this technique warrants the investment of further time.

**Notes**

1 I have written a short booklet that provides additional information about the 3D model building process developed and piloted for this research. Colour photographs of typical models built by participants are included alongside discussion of the research findings. If you would like a copy of the booklet, please contact me at l.hinthorne@uq.edu.au.

2 For a thorough discussion of the advantages of using Lego bricks over other modelling mediums, see Said, Roos and Statler (2001:11).
References


