Crossfire: 'Knowledge sharing should focus on learning culture, rather than the generation of knowledge'

JAMES WEBSTER and GEOFF PEARCE

In our debate between two experts, Crossfire invites James Webster and Geoff Pearce to debate the following: 'Knowledge sharing should focus on the learning culture of knowledge users, rather than the generation of knowledge products'.

Dear Geoff,

The product *and* the communication methodology must be tailored to the recipient

I'm very pleased to have the opportunity to discuss this issue, especially having spent most of the last 20 years managing and building the capacity of WatSan and hygiene promotion programmes in East Africa. My experiences from the hygiene promotion component are particularly relevant to this topic.

Anyone involved in knowledge sharing cross-culturally could no doubt give many examples of bad 'fit' of knowledge products to recipients. An often-quoted example in hygiene promotion is the use of large diagrams of mosquitoes to raise awareness of malaria: the message is ignored because 'Our mosquitoes are not that big'.

Is the solution simply to generate the 'correct' knowledge product, in this case life-sized pictures of mosquitoes for example? I don't think so – even the best product in the hands of a poor communicator, or even in the hands of a good communicator using inappropriate communication methodologies, is destined for disaster. The solution I believe is to understand the recipient's learning culture and tailor both the product but more importantly the communication methodology to the recipient.

In many ways these issues surrounding knowledge sharing mirror those of the appropriate technology movement that started in the 1970s. It is now established best practice that technology needs to 'fit' the culture of the recipient (in addition to the environmental and economic context). I hope and believe that soon it will be conventional wisdom that effective knowledge sharing needs primarily to focus on the learning culture of those for whom the knowledge is intended.

In order to appreciate this more fully, it is worth considering what constitutes preferred

James Webster is a Lecturer in Community Water and Sanitation, Cranfield University, UK and Geoff Pearce is a principal scientist in HR Wallingford's Water Management Group.

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learning styles at the individual and group level. At the individual level, these preferences may be categorized as visual (seeing), auditory (hearing), kinaesthetic (moving) or tactile (touching) (Bandler and Grinder, 1975). Educational researchers broadly accept that individuals learn better and more quickly if the teaching methods used match their preferred learning styles. Furthermore, it is accepted that as learning improves, so does self-esteem, with a further positive effect on learning (Davidoff and van den Berg, 1990).

However, these preferred learning styles are specific to the individual: the extent and nature of how they influence or are influenced by group culture is the subject of debate. Nevertheless, there are established and important cultural dimensions that are clearly relevant.

In the mosquito instance above, the most prominent cultural dimensions are abstract or concrete and random or sequential (Glenn, 1981; Wade, 2001; Gregorc, 2006). Traditional Western teaching style is abstract–sequential, i.e. working with ideas and images, building knowledge in a structured manner. Hence the use of large images of mosquitoes to illustrate the cause–effect links with malaria. By contrast the recipients' learning culture is concrete–random, similar to a teenager learning through helping an adult to repair cars. Here, images are taken literally, and when an individual gets malaria, the first question is often 'Who sent the mosquito?' (Although it is important to recognize that such 'random' connection of events may be highly logical and sequential to the individual.)

Another crucial cultural dimension of learning is the preferred style of communication. At the most obvious level, should one use 'chalk and talk', drama, video, radio, puppetry, focus group discussion, one-to-one or group training, child-to-child or gender specific training?

Does the learning culture prefer high- or low-context messages? The former is typically associated with developing country cultures, where the meaning of messages is hidden within the context and relationship between individuals; true intentions are concealed, and open critique of others is refrained from. It would therefore be inappropriate to ask a group that primarily operates through high-context messages for open feedback, let alone ask for constructive criticism of ideas. On the other hand, a preference for low-context messages, typical of Western cultures, sees meaning invested in words themselves, the explicit code, rather than the context of those words.

Unless there is a pragmatic recognition that such fundamental differences in learning cultures exist, the shelves of knowledge brokers will be littered with ill-fitting products in the same way that many

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developing countries are to this day littered with inappropriate technology.

Yours sincerely,
James

Dear James,

I hope in the next few lines to argue that substantive progress in the water sector requires that knowledge users are served by information and educational standards that are widely accepted and recognized. To achieve this, the knowledge products – and by this I mean degrees, books, papers, guidelines – need to be developed to professional standards of testing and review. Clearly a knowledge generating organization is not going to invest in a product that has to be produced in all the vernacular languages across the whole of Africa! It is surely important to produce outputs that can be trickled down in appropriate ways to the different communities. The means by which this is done I would suggest as being training and understanding at the highest level – say at the local university – followed by local/regional dissemination of various guidances through colleges and community workers with translation, adaptation and amplification added on the way. But the point from which this starts is the high-level knowledge product.

Knowledge users should be served by information and educational standards that are widely accepted and recognized

Effective knowledge sharing depends on the local information providers

My background and experience is in research on irrigation and water resource problems in Africa and Asia, and much of this work was carried out as part of the UK Department for International Development's (DFID)' KAR (Knowledge and Research) Programme. A key focus of this programme was on the development of outputs such as methodologies and tools that could be used by beneficiary communities. One of the important challenges in this programme was that of the 'uptake gap' – the gap between the dissemination of knowledge created and the uptake by the intended beneficiaries. For knowledge to be of value it needs to reach the people that can use it; and to reach them in a form that they can readily understand.

I fully agree that there is a need to focus on the beneficiaries' learning culture. However, effective knowledge sharing depends on the *local information providers* whose role is to process the information and training that is available, and explain it to the local communities they support. Given the susceptibility of the local communities to the plethora of risks they face, it is important that the information is tried, tested and correct. Who decides all this? To my mind this is where scientific rigour comes in. For instance in the point you make above, you substantiate your statements by referencing supportive, expert, peer-reviewed literature – and so the world works! The way the world organizes and disseminates its new knowledge is by peer-review and citation of

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technical literature. Without the formality and respectability of acceptance by professional and academic experts, no investor is going to put finance into any substantive development scheme. One can hardly expect the international financial institutions or governments themselves to invest in capital projects that are not provided with normal professional accountability.

A good example is the issue of flood management – a major problem in southern Africa at the time of writing. At governmental level, the development need is investment in flood protection works that will protect the major infrastructure of towns and cities from the severe physical and financial impacts of flooding. Funders, government departments, designers, constructors and even the communities at threat require such work to be carried out competently and reliably. Underpinning all this is the standard literature developed by universities and professional institutions. At the field level, people need appropriate advice on how to protect their communities – how to build raised drinking-water tanks and elevated community refuges, etc. and this involves use of local language and relevant explanatory tools. The point is that at both levels the initiatives need to be underpinned by formal technical knowledge. And where is that knowledge found? Oh look, it's those dusty tomes on the knowledge producers' shelves. Perhaps they are not so ill-fitting – in my opinion they provide the basic foundations on which new initiatives and adaptations are built.

Best regards,
Geoff

Flood protection initiatives need to be underpinned by formal technical knowledge

Dear Geoff,

I totally agree with your point that for knowledge to be valuable it needs to reach users in a form that can be readily understood.

However, you also suggest as a starting point 'high-level knowledge' and rely on trickle down for information dissemination. This suggests two things: 1) a dependence on Western knowledge and educational standards; and 2) a top-down, hierarchical structure.

Such a structure is in danger of ignoring the learning context of most end-users – their limited access to written material, the internet and networks. Furthermore, this structure would be in grave danger of ignoring the culture of end-users, as highlighted through terms such as local information *providers*, suggesting a very one-way process.

The dissemination and application of substantially technical products, such as the flood protection works you mention, which seek to shape the physical environment, would, on the face of it, seem bound to be appropriate to the learning culture of the recipient.

Yet your suggestion that flood management needs to 'build on the dusty tomes of formal technical knowledge' provides a good opportunity to look at an alternative 'basic foundation'.

Community-based disaster risk management (CBDRM) is being successfully employed in Bihar state, northern India, where eight major river basins cause annual flooding. In 2004 this affected 21 million people, destroying 670,000 houses and damaging many more (Venton, 2005).

The top-down approach adopted by the government is to build more and higher embankments. This has been resisted by rural communities as it avoids dealing with the political, social and economic causes of the disaster – people's vulnerability.

Flood protection also involves working with local people's ways of withstanding flooding

The CBDRM approach adopted by indigenous NGOs asks questions such as: how does the flooding affect the community, why does it have the impact that it does, and what strengths existing within the community can be used to withstand the flooding?

As a result, rather than embankments, which often exacerbate the problem by restricting flows and preventing valuable sedimentation, measures such as boats, raised hand-pumps, escape roads, evacuation routes and Village Development Committees have been adopted.

Sustainable management of water is as much cultural as it is technical

This shift in focus away from knowledge products to the learning culture in its broad sense has led to:

- attitude changes (rather than dependence on external aid for example);
- community ownership of the mitigation plan;
- strengthened local capacities;
- improved links with government and other powerful influences.

Thus products that primarily seek to shape the environment cannot be seen in isolation from their human environment: their uptake and success depends on the recipients' culture.

Whilst I would not advocate that cultural considerations are the missing link in knowledge sharing, it is no small coincidence that UNESCO has recently launched its 'Water and Cultural Diversity' project.

This project seeks to 'mainstream social and cultural components into water sciences and management to ensure sustainability of water resources and cultures … sustainable management of water is as much cultural as it is technical' (Venton, 2005).

As a member of the expert advisory group on this project, I am particularly keen on its strategy of promoting guidelines on how to introduce cultural dimensions into water management.

It is, I believe, only with such a shift in focus towards the culture of users that the largest steps towards achieving the MDGs will be made.

Thanks for the debate!

James

Dear James,

Perhaps we could agree that this debate is one where both viewpoints have merit. *Sharing* comprises both something to share and someone to share it with. Thus knowledge sharing needs both knowledge products *and* knowledge users. It is clear that we both aspire to development through improved knowledge transfer. However the title challenges us to advocate where the *focus* of knowledge sharing should be, and that is where we differ. I believe progress in development depends more on a pragmatic approach and less on a socially oriented one.

There are many situations where a top-down approach is needed for an integrated solution

Two responses to the points in your last instalment. First, your strong support for community-based solutions seems to ignore the question – what if the community doesn't have the answers itself? Second, I do not see that making high-level knowledge available to communities implies dependence on Western standards. Centres of learning thrive wherever there is societal development. What I do see is a global knowledge system that potentially gives individuals and communities access to huge amounts of information, ideas and knowledge. Admittedly the system is heavily challenged by burgeoning content fuelled by computer-processed information and contributors extended world-wide. For the water development sector, and indeed most other similar sectors, one of the major challenges of development is to get appropriate knowledge selected out and taken up by potential users.

With respect to the flood barriers point, adverse affects have long been recognized, but in providing flood protection, governments should provide an integrated approach that optimizes protection for the whole population and national assets. You'll see the point coming that one community at the head of a flood area may *prefer* occasional inundation to the inconvenience of the barrier; however the communities lower down the system may well *need* that barrier for protection from catastrophic flooding. My point is that there are many situations where a top–down solution is needed in order to ensure an integrated solution. For most investment programmes this is the case, certainly I'd expect this to be the approach when the issue is the one you mention involving the loss of two-thirds of a million homes. This does not rule out including community-developed solutions, many of which as we have both stated are already widely incorporated in such schemes.

Returning to your earlier example of malaria control, the

We need continued resources for professionally accepted knowledge products

existence of the malaria parasite was identified by Sir Ronald Ross (in 1897 at Secunderabad). The subsequent development of knowledge products in the form of research papers and then guidance notes have enabled communities all over the world to receive insightful and reliable information and thus to understand exactly what the problem is they face and what their options are. It is the reliable knowledge product that enables governments, communities and NGOs to determine for themselves what the best local option is.

Thus, I contend that knowledge sharing primarily depends on the generation of reliable and acceptably validated knowledge. There are many routes by which such knowledge flows – you have already mentioned the top-down one, but there are bottom-up routes, there are feedback loops, and there are a huge range of knowledge brokers who collate, refine and dispense knowledge. The role for these intermediaries does not exist if they do not have access to reliable knowledge in the first place.

Towards a conclusion, I agree that focus on the learning culture of communities is increasingly vital in improving the flow of available knowledge for communities to adopt and adapt and to return flow of community know-how. However, investment and improvement depend on reliable information, and they rely on a continued focus of available resources on the development of tested, professionally accepted knowledge products.

Yours,
Geoff

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