BRM – back to the future?

Has BRM drifted away from its founding principles?

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Many of us have participated in a BRM (bridge resource management), MRM, MCRM or similar programme. I hope that you found it different from the other courses you have attended. Yet I know that often there are no differences; it is just another course.

BRM is now included in STCW, which talks about competences. These are connected with knowledge and skills and are verified by tests and exams. This risks pushing BRM closer to bridge team management (BTM). BTM differs fundamentally from BRM, as its focus is on knowledge and skills, which can be checked with tests and exams. By contrast, BRM is a powerful method of stimulating officers to think for themselves about issues such as attitudes and behaviour.

Some 25 years after my initiation into the wonderful world of BRM, I would like to look back at the original intentions and what we can learn from them.

Workshop versus classroom

My first encounter with BRM was in 1992, during the SASMEX conference in London. As an Amsterdam pilot, I applied as a workshop leader (WSL) and was accepted. Early in 1993, I participated in what I believe was the first WSL training programme at the SAS Flight Academy in Arlanda.

Note the words 'workshop' and 'workshop leader'. These terms highlight a vital aspect of BRM. It is a course in the form of a workshop, not classroom teaching. Workshop leaders are not instructors. They are facilitators. The original WSL guide states: 'Your role is not to give wisdom and tell [the participants] answers; you should encourage discussion and NOT express opinions.'

This implies that the WSL is not standing in front of a whiteboard,

A typical set-up for a BRM workshop

a smartboard or any other type of board. The WSL would normally be sitting down. And the participants are not facing the WSL or a board; they face each other. The room set-up is very important and typically involves desks arranged in a square or round a large oval table. The group size needs to be small enough to make sure everyone is able to participate in the discussions, yet large enough to have a range of different viewpoints. A group of six to 12 is ideal.

Using CBT

The original workshop was organised on a rhythm of an introduction, followed by computer-based training (CBT) modules. The CBT module introduces the specific subject, some background information and examples of behaviour. The modules are followed by discussions, alternating with case studies.

There are some advantages in using CBT. One of them is that if a participant doesn't agree with what is being taught, they are disagreeing with the CBT module – not with an instructor. If the theory module were given by a WSL, participants might be reluctant to disagree with the WSL personally. The use of CBT allows the WSL to maintain some distance from the material, making it easier for the group to open up and talk about how they really feel about the subject. I have no problems with CBT modules that are not entirely realistic. They provide an excellent start for discussions, such as 'So why do you think this CBT is not relevant?'

CBT is necessary where participants are taking part in their first BRM workshop, but I have done meaningful refresher workshops without using CBT. During these, we followed the sequence of the modules, but went straight to discussion without the introduction. I initiated discussions with questions about the relevance or practical use of the module, or even, when we had arrived at a sufficient level of trust, with provocative remarks. To provide more depth and variation I used case studies, DVDs, YouTube and other sources of information.

Discussion

The 'work' of the workshops takes place during the discussions. 'Discussion' implies the voices of the participants are predominant. If the voice of the WSL is heard the majority of the time, it might indicate that something is going wrong. Sometimes a lot is achieved even during the breaks and after-session discussions. The facilitator is achieving some success simply by introducing various people to each other and encouraging them to talk.

The best discussions are those where there is variety in the group. When there are only captains, talks about pilots tend to focus on bad pilots (those are the ones the captains remember). Guess what happens when the group consists of pilots? Both have misgivings about engineers… When all the participants are experienced, there can be a tendency to look down on younger officers, and when they are all quite young, they have problems with the dinosaurs.

Even the difference between VLCC captains and ferry captains, in matters like voyage/departure preparations and false alarms on the fire panel, proved to be significant. Having lecturers from nautical colleges

confronted with reality proved very powerful.

If the discussion is to make a difference, participants must feel they can talk freely. The presence of company observers could inhibit free discussion and lead attendees to give 'politically correct' answers. This does not change attitudes! Where a company has a mature safety culture in which participants feel free to raise difficult issues, it may be possible to have a productive discussion with company observers present.

Specialised workshops

People sometimes assume that pilots are lagging behind with BRM. In my experience, there is very little difference between shipping companies and pilots in this respect. In many ports, pilots are former seafarers, with the normal seafarer training including BRM. To a large extent, the level of BRM of pilots reflects the level of BRM of the fleets they sailed on as officers.

To promote mutual understanding, there is scope to develop BRM-like workshops or special purpose seminars concerning port operations involving captains/bridge teams, pilots, tug masters and VTS operators. Single group workshops, for example for apprentice pilots, can fulfil a purpose, but need harder work from the WSL to make sure different perspectives are covered.

In discussing course participants I have talked about captains, engineers, mates, pilots – but not about students. The BRM workshop is geared for active professionals, who are able to relate the discussion to real day-to-day operations. It is important that participants have experience to draw on when discussing the case studies. For students a course is much more appropiate than a workshop.

Being a facilitator

As a new WSL, I was often afraid that a group would not come to the 'right' conclusions, even though the WSL guide clearly tells me that there is no such thing. As I gained experience, I discovered that most of the ideas behind BRM were such common sense that usually the group came to those conclusions without having to be pushed towards them.

In one workshop, the group decided that Short Term Strategy (STS) was very suitable for most unexpected occurrences, but not for fire. They were convinced that with fire you should not think, just extinguish. Normally the group would include a former salvage tug crew member who would educate the group never to fight a fire without thinking (= STS). This time there was no such person. I decided to use the case study of the fire on the *Prinsendam*. The fire was extinguished three times, but kept reigniting, larger each time, because the problem that caused it had not been identified. The group came to the conclusion that, although it is necessary to fight the fire, it can help a great deal to have two or three persons think about what is happening and identify alternatives. They became convinced *by themselves* of the need for a structured approach like the five steps of STS, without me having to convince them.

In time I learned to lead the discussions by

Some more quotes from the original BRM workshop leader guide (emphasis mine):

For the participants:

● The messages are practical and not theoretical: *if you decide that they are not relevant to you, and you ignore them, then that is OK.*

● The CBT modules are just designed to get you thinking and talking about situations. Don't treat them as TRUTH and end of the story: they are just the beginning.

For the WSL:

● The course wants to provoke: no problem if a participant doesn't agree.

● Talk from your own experience, the perspective of your normal job. No theoretical talk, but as practical professionals.

● Your role is *not to give wisdom and tell them answers, instead you should encourage discussion and NOT express opinions.*

● *DON'T TAKE YOURSELF OR THE COURSE TOO SERIOUSLY*

There are not too many courses that give this kind of guidance to *instructors.*

giving the participants who had interesting ideas the opportunity to express them, and, if required, to put the brake on some others who were 'too much present' and not giving others the opportunity to speak. I collected quite a few case studies, which meant that I could choose relevant examples for the specific group and the participants could evaluate their ideas.

However, as a workshop leader, you have to learn to live with not having total control. When you say in the introduction that it is OK to disagree with you, that means you cannot push the opinion you consider to be correct time and time again during the discussions. As WSL, you have to accept that this is a workshop, not a lecture and you are a facilitator, not an instructor.

Skills versus knowledge

The idea of a BRM workshop is not to *teach* skills, but to convince people who already have those skills to use them; to produce a change in attitude. The workshop provides participants with an opportunity to look in the mirror and ask: 'Am I doing what I think I should be doing?' and 'Am I making the best use of *all my* resources (my own skills, my team members, other sources like instruments or VTS)?'

That is not to say that there are no skills included. Skills and knowledge are part of the course, for example the five steps of STS. It is not possible to completely separate attitudes, behaviour, skills and the like.

Some points that can signal the difference between aiming at skills (l) *versus* attitudes (r) are:

Lecture	Workshop
Instructor	Workshop leader/ facilitator
Standing in front of a board (of any type)	Sitting
Telling how it should be done – transferring skills (albeit possibly very interactive)	Asking the group for their experiences and thoughts Focusing discussions by asking the 'right' questions and actively involving participants with helpful ideas
Instructor's voice predominant	WSL's voice intermittent
Test pass or fail	Proof of participation

An example: in BRM, challenge should be invited. But inviting challenge is all about the *attitude*, not about knowing that it should be done or saying the correct words. There is a Dutch expression: 'My door is always open', which is meant to indicate that anyone can ask any question at any time. However, there are people who are able to say this in such a way that although the door is 'open', there is clearly a threshold 2m high that few are willing to scale. Attitudes speak louder than words.

Translating ideas into behaviour

The 'reinforcement' – the practical exercise that concludes the workshop – gives an opportunity to translate the ideas generated during the workshop into behaviour. This can be done even without a simulator. During our first WSL training, the reinforcement was a laptop exercise performed with a small team. It worked quite well.

The simulator exercises that were developed as a next stage made it harder for the participants to put enough emphasis on attitude/ communication issues. For most it was far easier, and felt more comfortable, to focus on the technical side of things. In simulator exercises, I needed some experience as WSL to learn how to refocus the participants on BRM aspects without ignoring technical issues. These technical issues cannot be ignored: the idea behind BRM is to minimise the number of collisions, groundings and the like by making use of all means. During the exercises, it is not OK to run aground so long as 'appropriate BRM behaviours' have been displayed. If the risk was not identified in time to avert it, BRM had not fulfilled its purpose.

Debriefing the reinforcement exercise was again something I had to learn. If I told people what they had done wrong, they started to think about why they had done it wrong. And if they thought long enough, they generally came to the conclusion that, in the circumstances, they could hardly have done anything else. Instead, when I knew something was coming up during the playback, I learned to say 'Just watch!' Seeing yourself operate can be very confronting. The participants generally came to the conclusion that they would act differently next time without me having to interfere.

Later on I learned that a very good way to focus the thoughts of participants on learning rather than defending their actions, was to ask: 'If you were to do this again, would you do it differently?'

Measuring results

When it comes to measuring results, for BRM the emphasis is on whether attitudes have changed. The best observable indicator for attitudes is behaviour. To be meaningfully assessed, behaviour needs to be observed over a longer period of time while the persons don't *feel* observed. If this is not possible, well-constructed questionnaires can provide an indication. Another suitable way to measure results would be to ask the participants to do a case study, answering in text (no multiple choice questions). The answers would give an indication of their understanding of principles and of attitudes. An exam/test is not an indicator for attitude.

It is good to realise that one of the three truths at the basis of BRM is: 'We all make mistakes'. If people were able to display perfect BRM behaviour at all times, BRM would not be needed at all. BRM is there *because* people make mistakes; not only technical mistakes but also BRM-type mistakes. In almost every accident report we read about 'mistakes in BRM' – but of course mistakes in BRM behaviour were made in every uneventful voyage as well. Of the 4,500 pilotages I performed, I am convinced that there was not one without BRM imperfections. I believe in using accident reports to help stay aware and to help support the practical aspects in which we can improve, but I have no expectation that a goal of 'perfect BRM behaviour' will ever be reached. That said, it is a very powerful way of making sure that we are using all available means to operate as safely as we can.

Twenty-five years after the BRM course was introduced, there are now fundamental differences between BRM as it was originally conceived and as it is now often delivered. Thankfully, there are still some providers that organise workshops that add real value to the course, whether they are called BRM, MCRM or MRM. It would be unfortunate to lose such a powerful method of stimulating officers to think for themselves about issues such as attitudes and behaviour.

BRM in practice

As a practitioner, the workshops helped me to recognise situations early and to do something about it. I vividly remember a pilot trip where I was on board the pilot tender heading for an inbound cruise vessel. The cruise vessel cut the corner and went straight for the breakwaters to try to come ahead of an inbound container ship. She was doing 17kt, and in those days our pilot tender could do only 13kt, so it was a bit hard to catch up. At last she slowed down and I boarded. When I came on to the bridge, less than a mile from the breakwaters, I saw the two telegraphs on full ahead. We were halfway past the container vessel, way north of the leading line with a strong tide setting to the north. I knew the lock was not ready and the Captain did not want to employ tugs, which did not make it easier to wait (twin turbines, one rudder, no thrusters…), but would let me do the shiphandling.

Something that seldom happens to me happened then: I lost control of myself, became quite angry and asked the Captain why he was intent on parking the ship on the breakwaters at maximum speed. The 2nd mate came to me and asked if I wanted a cup of coffee. In my mind I saw the video in the Authority and Assertiveness module, in which the 2nd mate offers a cup of coffee to the Captain and chief mate who have clashed. This was not about me or the Captain, but about getting the ship in safely. I took a deep breath and we came to a good working relationship (no, we did not become friends).
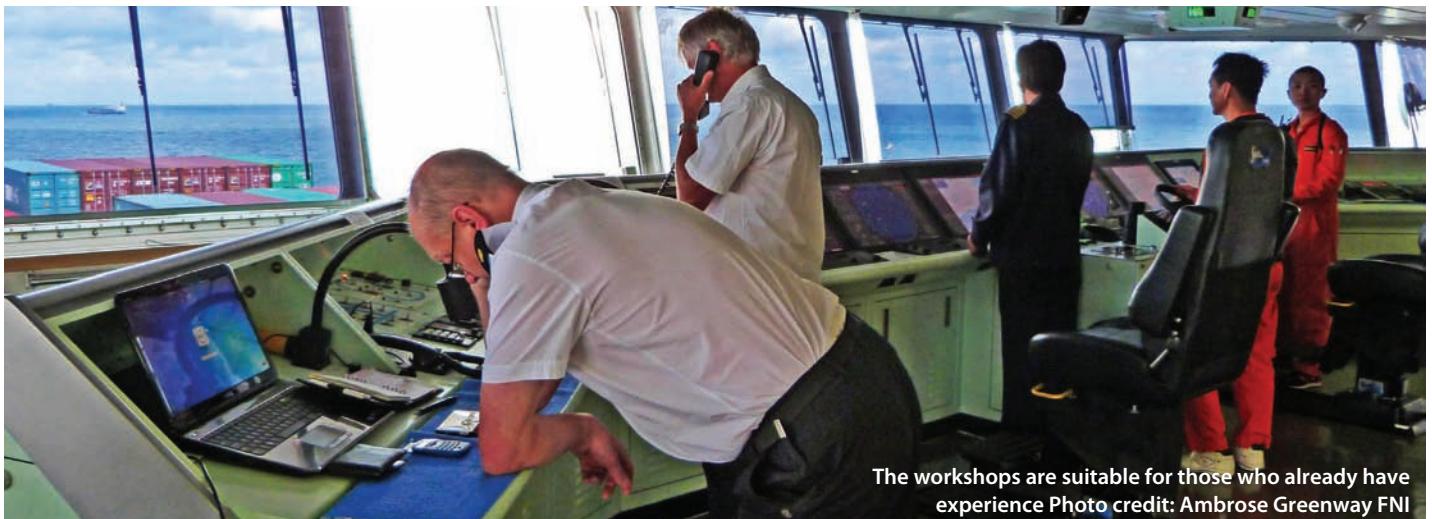
The workshops are suitable for those who already have experience Photo credit: Ambrose Greenway FNI