

Throwing Light on Evaluation?

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For many years the evaluation of learning in management was conducted in a hard nosed way which relied heavily on the traditional methods of 'scientific' research (for example, Hesseling, 1966). One of the features of this style of evaluation was that it required the formulation of preconceived hypotheses about what was going to be learnt, and it was against these preconceptions that tests of learning would be carried out. More recently this style has been contrasted with a 'naturalistic' approach where the evaluator has no preconceived hypotheses, but simply absorbs information and then looks for themes about what has been learnt. These contrasting styles, the 'scientific' and the 'naturalistic', may be used to define the ends of a continuum of evaluation approaches.

Running across this continuum there appears to be another at approximately right angles (see Figure 1). At one end is a view that the researchers should be distanced from what they are researching: 'distanced' rigour. At the other is the 'involved' pragmatic researcher trying to solve a particular problem. (For further discussion on this see Easterby-Smith, 1985). Figure 1 summarises these main dimensions of evaluation style.

By plotting these two dimensions at right angles to each other in Figure 1 I assume that it is possible at the same time to be both 'naturalistic' and 'distanced' or 'scientific' and 'involved'. The reasons for making this assumption are twofold:

The first is that there are some distinct differences in the nature and procedures of the physical sciences and the social sciences. For example, development in the physical sciences is achieved through trying to disprove theories; the body of science at any moment consisting of theories which have not been disproved by controlled experiment. The social sciences also make much use of theories, the latter consists of theories as well, but proof or disproof can only be made by interpretation using human judgement. This therefore implies, and requires, a degree of 'involvement' in the procedures of social science.

The second reason derives from the nature of the object of evaluation

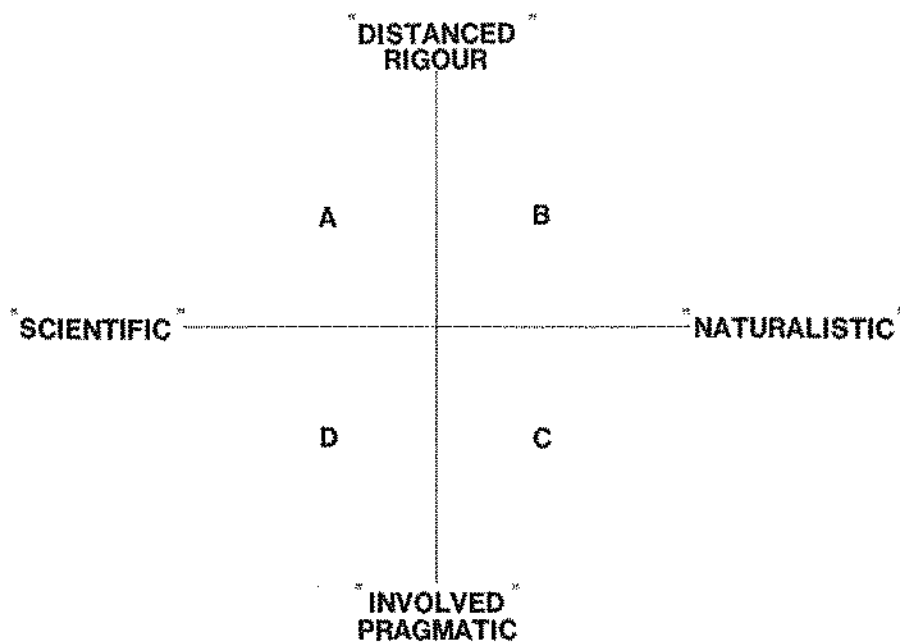


Figure 1. Philosophical approaches to evaluation

research: learning. As I see it, learning must involve 'connections' in the head of the learner and irrespective of what method is used (questionnaire, observation, tests, examinations etc.), the evaluation procedure will result in the learner making the same or further connections in his head (i.e. reinforcement of existing learning, or further learning). This is different to that found in the physical sciences where the researcher does not affect the object of research. Putting questions on paper can be done 'scientifically' but for the respondent it involves making connections in his 'learners head' just as reading this is making connections for you. I am saying the 'scientific' researcher is 'involved' with the object of research, learning, willy nilly. The figure does allow for degrees of 'involvement' however.

By 'naturalistically' absorbing the effects of the learner's behaviour on those around him it is possible to 'distance' oneself from the 'connections' in the learner's head and the learner.

Some Theoretical Illumination

I spent seven years in post-school chemistry research and education, so that

most people would expect me to be at the hard nosed 'scientific' end of the spectrum rather than the 'naturalistic' end.

However, this very experience tells me that there must be so little control or even knowledge of active variables in many of the learning situations that I am involved with, that 'scientific' evaluation is not possible. Even if it were possible to control all of the variables the chances of the results being useful in terms of setting up subsequent, completely identical learning situations are too limited to be worth the attempt. This is because there seems to me to be a parallel here to a particular type of chemical reaction: a photochemical reaction. In a photochemical reaction (learning event) thousands of molecules (participants) are brought together in many random states and exposed to a bright light (the learning input) and the result is thousands of different products. Most of these fall apart and return to their original state. Some products remain, sometimes in reasonable quantity (major learning). Many other products are present in minute quantities which are only detected in subsequent reactions. If the conditions are altered in any way the products are completely different, even when the change is as simple as a different reaction flask (room).

Chemical products from photochemical reactions are detected by moving through a spectrum (ultra violet, infra red, etc.) and picking up characteristic finger prints indicating their presence. One can draw a parallel learning product spectrum (see Figure 2). In this the height of the peaks indicating the quantity of learning, and the sharpness of the peak indicating the preciseness of the learning product (the sharper the peak the more precise the learning).

In the case of learning evaluation, as in photochemical product detection,

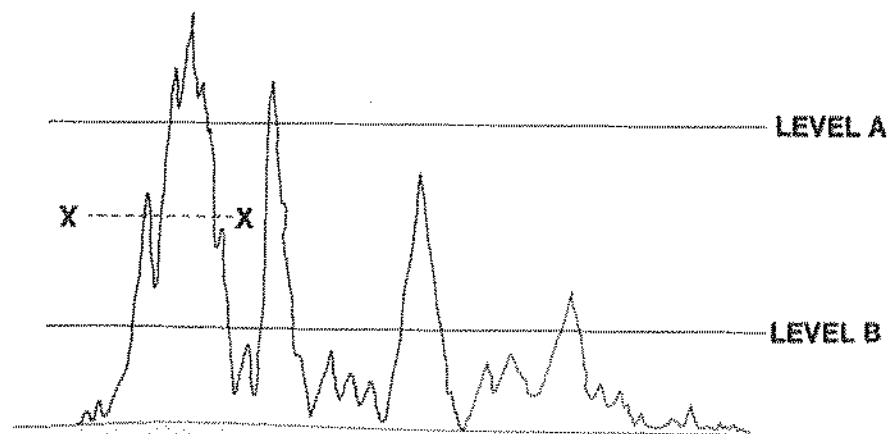


Figure 2. A Learning Product Spectrum

the detection system is likely to 'contaminate' the reaction. It may even act as a catalyst and promote learning, so that the products or some of them will be different.

What is being suggested here is that:

- being INVOLVED in the detection system (level B in Figure 2) may give greater levels of awareness of learning products but affect the results;
- whilst being DISTANCE (level A in Figure 2) will only detect some major products of learning.

Many products of reactions are not detected if the right spectrum is not used, or it is incompletely checked. In terms of learning evaluation the parallel is:

- the SCIENTIFIC researcher may miss major learning because his hypothesis limits him to only one part of the spectrum when he checks for the learning (line X---X in Figure 2);
- the NATURALISTIC researcher may check the whole spectrum but selectively absorb more data from some parts of the spectrum.

Bogdan and Taylor (1975) actually say, 'Some argue that the qualitative researcher being the sole instrument acts like a sieve which selectively collects and analyses non-representative data'.

The Issues in Practice

Whilst I was on a part-time MA in Management Learning at Lancaster University the issues involved here became clearer. This was a result of carrying out an investigation of learning using three types of evaluation method on one course.

The course was intended to help develop management skills, for managers of residential and day care establishments, such as probation hostels, mental handicap centres, homes for adolescent offenders. The course has been run four times, the fourth during the process of the investigation. This meant data on learning spanned three years from the initial learning inputs.

The three methods were:

(i) Use of an organisation questionnaire to investigate organisational changes. This had been completed by participants and their staff when on the course. They were asked to complete it again with as far as possible the same staff respondents. It took the form of 120 statements to agree with or to leave blank. The statements were both positive and negative and about twelve areas of organisation, e.g. structure, control, selection, teamwork, rewards, motivation etc.

(ii) A questionnaire which had scaled responses to the learning from the course of different types of management learning (e.g. decision making, professional knowledge, social skills and abilities, creativity etc.). This

questionnaire also called for unstructured responses on which parts of the course had helped in producing the learning claimed.

(iii) Some of the participants and their staff were also interviewed in a fairly unstructured way. The interviews were made with a discretely placed tape recorder. This was later switched off but the interview continued with notes made immediately afterwards.

Fig. 1 is obviously two dimensional and it can now be seen that where I managed to carry out all three methods I was likely to collect data that was: (a) at different levels up and down the 'involved'/'distanced' axis; and (b) at various points along the continuum 'scientific'/'naturalistic'. Note however that this means the issues are likely to be entangled with one another because there are *two* dimensions. This means that I would be unlikely to find pure *one* dimensional data.

The first approach falls into quadrant A on Figure 1, whilst the second questionnaire falls into quadrants A and B. The interviews fall into quadrant D as I was checking out the hypothesis that participants' learning would alter behaviour, but they also stray into quadrant C as the approach was open-ended.

I give below some of the comments taped and written which illustrate the issues and their entanglement. In order to give greater clarity I have plotted the areas which they 'illuminate' in Figures 3 and 4.

The 'Distance'/'Involved' Issue

One participant who had completed the organisation questionnaire without difficulty (Area 1, Figure 3), wrote a letter about the second questionnaire (Area 2, Figure 3).

I have let you down badly with this exercise. I have attempted to complete the form countless times. In my own mind I know I did benefit from the course and enjoyed it very much but I simply cannot answer the questions. Because we do not have appraisal interviews I do not really know what my employers really think of me, but I have run my home for six years, and eventually won all my battles so I can't be doing a bad job. However, I am unable to judge myself and rate myself high or low. I have filled in the parts I could but am quite obviously a miserable failure and do apologise.

This participant was later interviewed and during the course of the interview she went on to say (Area 3, Figure 3):

Plus that second questionnaire had to be how I saw me (pause) I could not bring myself to say that perhaps I'm very good at something (pause) nobody's ever told me I am (pause - laughter) but I might secretly think that I am . . . but I couldn't say that on paper . . . ? I thought about YOU reading it . . . I cannot tell you how many times I actually sat down and tried, I couldn't, I just couldn't.

Another participant said of the same questionnaire in interview (again Area 3, Figure 3):

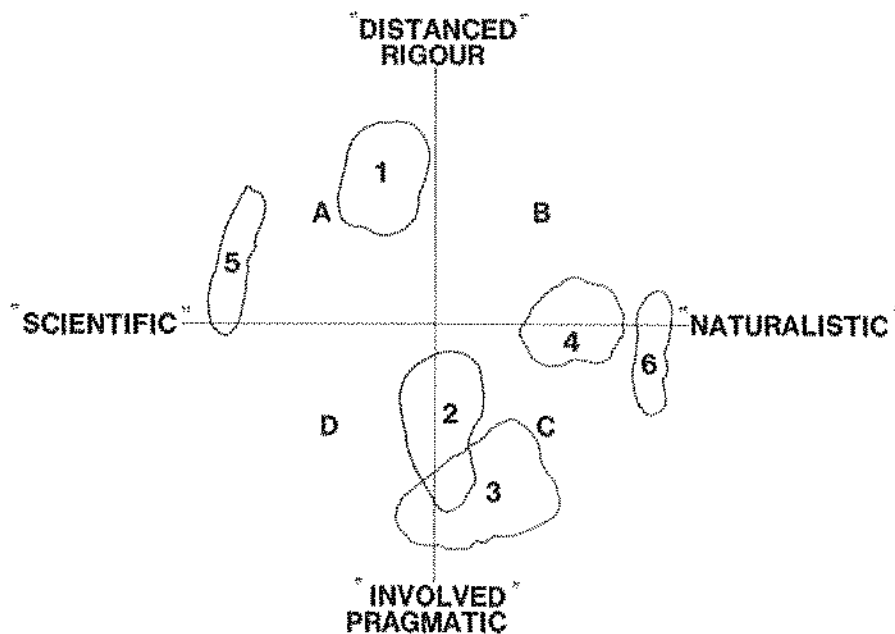


Figure 3. Areas illuminated by the examples on the two continuums 'distanced' – 'involved' and 'scientific' – 'naturalistic'

Some of the questions were (pause) to be answered honestly would make me too proud . . . I must be honest with *you* the course done me some good, no question about it . . . it should be left to others to judge.

The first participant revealed in discussion (Area 4, Figure 3):

I keep a list of priorities now, things to be done before 10 a.m. Even if you don't get them done before ten because of an emergency – you still do the next thing first – whereas in the old system you would think I'll do all that tomorrow. You really do aim to achieve something and you get it done. I've been better equipped to cope with days when the phone never stops ringing and social workers come all day. I've prepared for it. I was very higgledy-piggledy before.

The 'Scientific'/'Naturalistic' Issue

Another participant who was claiming very little learning of course content in her responses to the 'Scientifically', 'Distanced', questionnaires (Area 5, Figure 3) discussed the following (Area 6, Figure 3):

I still think about that . . . (CCTV role play of unexpected collapse in a lift by tutor) . . . I still have nightmares about the girl dying (participant's experience of real collapse of student). One of the things that upsets me, when *YOU* fell over, I stepped backwards, quite subconsciously, because I didn't want anything

to do with it because I'd been through that before. I'm ashamed of that. I thought afterwards how bloody awful. I actually stepped backwards . . . I went behind a table before tackling the girl – it wouldn't have made any difference to her living or dying – but that's what I did. Quite shocking to me to find I still stepped back. Very useful for me to see how quickly I lost myself in it.

This developed into an exploration of relating the role play and real incident with the researcher listening. It seems to me that the evaluation was both 'naturalistic' and 'involved' providing considerable self-exploration, and new learning for the participant and researcher alike.

The Three Methods Combined

For clarity and simplicity I will use results from only one learning input with only one participant and his establishment staff to illustrate this. The input is that of selection interviewing.

The organisation questionnaire revealed a quite significant positive shift of view both by the participant, and to a greater extent the staff (Area 7, Figure 4). The participant claimed learning in: emotional resilience, social skills, sensitivity to events, balanced learning habits, problem solving and decision making, and lastly proactivity. Interviewing was claimed as an area of specific improvement in the open ended questions.

In my interview of him (Area 8, Figure 4), he recalled a particular overhead and described with his hands the 'cone' of questions about a topic; open ended at the top, probes in the middle, and closed ended to complete the topic at the bottom of the cone. I probed why he used his hands to describe the cone. He said, 'Yes I've a strong visual image of the cone. I believe 75% of what you learn is what you see.'

I interviewed a new 18-year-old member of staff who had just completed two years pre-social care training (Area 9, Figure 4).

She said:

I liked the way I had my interview – because Mr. (participant on course) was very friendly. I'd only had one interview before. The last interview I had was absolutely terrible! They were really *nasty*, asked us awkward questions all the way through. From the moment I walked into the interview it was dead nice – just asked us normal questions – he was really nice to us. I thought it had gone well. I was honest. It wasn't like going for a job, it was just like sitting talking to someone you already knew. It was good.

Conclusions

In the evaluation of management learning, combining Figure 1 with the data revealed by using the three approaches:

1. Enables a clear identification of the type or types of evaluation to use in any given set of circumstances.

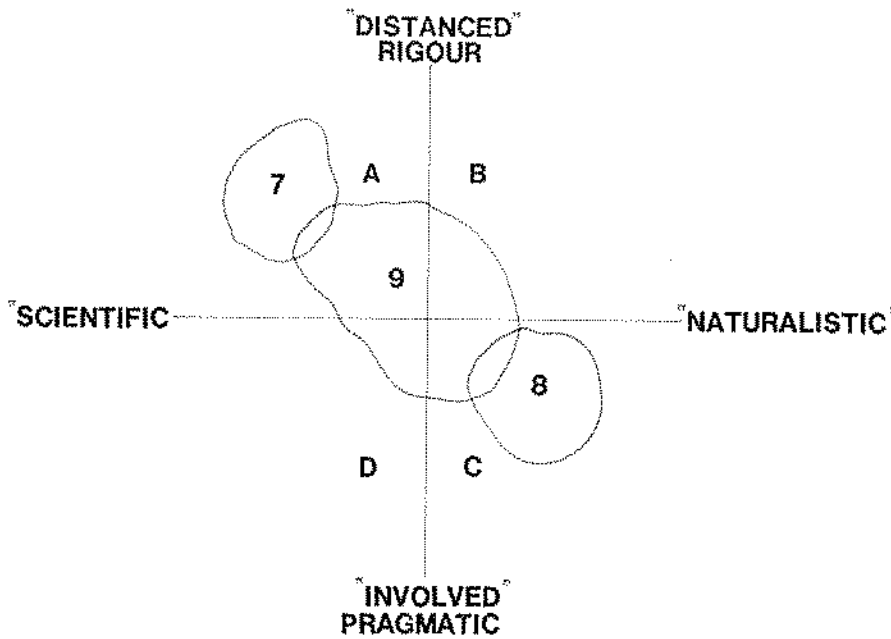


Figure 4. Areas illuminated by a combined approach

2. Enables a clear identification of the level of involvement of the researcher together with the type(s) of effect this will have on the research.
3. Enables a clearer identification of the learning spectrum possible from learning inputs and hence the appropriateness of a hypothesis or hypotheses.
4. Clarifies the fact that one method of evaluation cannot tell you everything about the learning that took place, or might yet occur as a result of a learning input. This is perhaps the most important conclusion.
5. Allows the restrictions and caveats on what the data reveal to be identified more easily.
6. Finally but not least it enables research data to be plotted as coming from a particular area of Figure 1. This means that the data can be treated with whatever caveats apply to data that come from that area.

This very simple framework, I believe, throws considerable light on evaluation.

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