Reflective Thought in the Outdoor Environment

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Introduction

Theories of experiential learning have tended to focus upon reflective thought as an important part of the learning process. Kolb (1984) developed the work of Dewey (1938) into experiential learning theory, which hinges upon a 4-stage model, the "Experiential Learning Cycle". This cycle includes four modes of operation:

1. The experience itself.
2. Review and reflection upon this experience.
3. Abstraction and theorization from the experience.
4. Active experimentation with the abstracted concepts and theories in the form of planning for future experiences.

These processes are to be understood as ongoing, and can occur within the space of minutes, hours, days, or longer. Kolb's work has been criticized by Webb (2004) based an evaluation begun in 1977, but not published. Webb concluded that "the infrastructure of experiential learning theory, (and) its model...is faulty at the core", arguing that all four modes identified by Kolb are not necessary for learning to take place.

Nevertheless, Kolb's theory has been widely accepted and adopted by many practitioners. Manuals for outdoor practitioners urge the promotion of reflective techniques. For example, Ricketts and Willis (2001) have argued that practitioners ought to be "extracting meaningful learning from experience" and Exeter (2001) has adapted Kolb's four-stage cycle specifically for the outdoor professional working in Outward Bound settings. His work provides a "tool box" of methods designed to encourage post experience reflection from participants on Outward Bound programs. Pfeiffer and Jones (1983) go further and claim that the processing stages of the experiential learning cycle "are even more important than the experiencing stage."

Honey and Mumford (1982) took Kolb's cycle and devised from it a theory of learning styles that categorizes learners as activists, reflectors, theorists or pragmatists. This suggests that some people are more likely to be natural reflective thinkers than others and might be likely to reflect spontaneously without the techniques proposed by Pfeiffer and Jones (1983) and Exeter (2001). Gardner (1983, 1999) introduced the concept of multiple intelligences, which significantly widened the concept of learning styles. Gardner eventually identified eight relatively autonomous intelligences available to all

humans, which are: linguistic, logical-mathematical, spatial, musical, bodily-kinaesthetic, interpersonal, intrapersonal and naturalistic. Gardner maintains that the number of intelligences is less important than the multiplicity of them, and has even considered a ninth: spiritual intelligence. He maintains that each human being has a unique mix (or profile) of strengths and weaknesses in the intelligences. It would be natural to assume that a personal profile strong on the bodily-kinaesthetic and naturalistic intelligences might lend itself to learning in the outdoors. Yet, it might also be considered that people with a high level of intrapersonal intelligence are more likely to engage in personal reflection. Gardner emphasises equity between the intelligences, and Honey and Mumford do not suggest a hierarchy of thinking. Such hierarchies have been suggested by Bloom & Krathwohl (1956) focusing upon the cognitive domain, and Krathwohl et al. (1964), considering the affective domain.

The Expedition

Research undertaken during a case study in July 2003 set out to investigate the role of the reflective process in the experience of 20 expedition participants aged 15-19, there were 16 males and 4 females. There were also10 leaders, 8 males, and 2 females. Two were qualified mountain leaders, four others had lesser outdoor leadership qualifications and all had mountain experience in areas similar to those being explored, one having Himalayan experience.

The five-day expedition was over land and sea from south Devon, England to northern Iceland via Aberdeen, the Shetland Islands and the Faroe islands. The trek was distance of 1200 miles. This journey was an important element of the expedition. It would, allow time to adjust to new routines and people. Transport was in five, four-wheel drive vehicles, rendering the party largely self-sufficient though vehicle dependent. Commercial car-ferries were used between Aberdeen and Lerwick, then Lerwick to Seydisfjordur, on the east coast of Iceland.

Aims of the expedition

The aims of the expedition were:

1. To visit an area of wilderness and spend a period of 5 weeks camping there.
2. To map and log two glaciers in the Trollaskagi Mountains, northern Iceland, and compare the results with mapping previously undertaken by the universities of Exeter and Leeds.
3. To undertake glacier walking, ice climbing and mountaineering activities.
4. To enable a sub-group to undertake an expedition for the Duke of Edinburgh award at gold level.
5. To promote the personal and social development of the participants.

It is interesting that number five came last in the stated aims and that there was no structures in place to promote this development. The collective opinion seemed to be that the experience itself would be enough to promote personal and social development. This thinking paralleled the "Mountains Speak for Themselves" model, outlined by Bacon (1987), but was at odds with much other published material, (e.g. Exeter 2001, Pfeiffer and Jones, 1983.)

The objectives of the research were to investigate whether the Kolb/Exeter cycle of experiential learning provided a pedagogical model for outdoor learning on the 2003 Iceland expedition and to investigate the extent to which reflective thought processes took place among participants.

Methods

The methodology was observation of leader/ participant interaction during a five-day period during the expedition. Through observation the investigator could determine the extent to which the leaders were encouraging reflection upon the activities. He could also determine whether participants engaged in dialogue with each other about the activities. This was followed by a series of semi-structured interviews with the participants. The purpose of these interviews was to determine the extent of reflective thought hours, then days, following the activities. However, a major methodological problem emerged. By asking questions about reflection the researcher was, of course, intervening in the process. He was sometimes left feeling that reflection had indeed taken place, but that perhaps this was *because* of his questioning. The opportunity of carrying out unstructured interviews with three of the leaders also presented itself.

The instructor spent the first 8 days observing generally in order to allow the expedition members to become familiarized with his presence. During this time notes or recordings were not kept, though a Dictaphone was in the researcher's hand in order to familiarize subjects with its presence. On the 9th day the group walked from base camp at Klaengsholl to the Gljufurajokull glacier (6 kilometres and a strenuous climb to 900 meters) to practice ice work. This involved work in small groups; fixing crampons and ropes, walking on the glacier. In a larger group instruction was given on the techniques of ice arrest using ice axes. The whole group practiced these techniques. Once finished, the walk off the glacier and back to the vehicles took about two hours.

Half of the interviews followed this day's activity. The following five days included: A day walk/climb to 900 meters with more ice work. A half-day hard ascent, 5 kilometres with ridge walking to retrieve a lost pair of crampons. The establishment of two sub-camps close to the ice line to facilitate the glacier mapping. Between days 8 and 15, therefore, the researcher observed all of the active participants (a small number of participants were ill or injured by this time) and leaders undertaking a range of activities in varying group compositions and in different areas of the Trollaskagi Mountains. The remaining half of the participant interviews and the leader interviews were recorded on days 16 and 17.

Findings

There was feedback from the leaders to the participants, but no evidence of the encouragement of reflection by the leaders. Feedback was focused upon their style and effectiveness. Elsewhere, this writer has drawn attention to the potential of walks to and from climbs for the encouragement of reflection in the spiritual dimension, (Rea, 2003.) The walks to and from the glaciers and ascents in the Trollaskagi Mountains were long; well over an hour each way. Thus there was plenty of opportunity for quality feedback and the encouragement of reflection.

"It was such a long walk there was nothing really to think about. We sort of thought about that, (the activity just completed,)" (male, aged 16.) There was no evidence of the leaders using such opportunities to encourage participant reflection. Much of the dialogue observed between the leaders and participants was directed on hard skills during the activity and on the participants' enjoyment afterwards. This was supported in the participant interviews. When it was asked if they had had chance to talk to a leader after any of the activities half of the participants said they had not spoken to the leaders following their experience on the ice. Of the other half, most said the conversations focussed on enjoyment of the activity.

The leaders were interviewed to try to gain some understanding of their approach to leadership on the expedition. "We're doing the experience bit, but not getting as far as the theorizing and rationalization. Quite a lot of the time, if the activity takes place in the field, when you get out of the field, that's it! Everyone has a shower and goes home and you never get to that reflection stage."

It was clear that this leader regarded the encouragement of reflection as "formal learning", something he was determined to avoid. He challenged those like Ricketts and Willis (2001) and Pfeiffer and Jones (1983) who see processing the experience as of greater importance than the experience itself.

There was significant evidence, gained from the observations and interviews, of spontaneous reflection by participants. The majority of the participants (85%) said they had thought about their ice experiences soon afterwards. This often took place on the way down from the glacier, for example at the end of day 9, or following the mapping activity. It was not until the participants were comfortably away from the ice that reflective thinking took place. Some of this reflection was superficial, and again the focus was often on enjoyment. There were, however, examples of much more specific and focussed thought. This showed spontaneous processing of the techniques used and lessons learned.

Sometimes, this reflection interacted with dialogue between the participants about their experiences. At least one participant engaged in meta-cognitive reflections about his ice experience. He showed he had begun to engage in thinking about his thinking.

He also indicated that his learning was closely related to his interest and effort, "because I'm putting so much effort into the things I do, (walking on the ice) I feel like

I gain more, perhaps experience or like learning in what I do. If you're not interested...you don't have some passion for it then its meaningless...gumpf," This accords with Krathwohl et al's (1964) theory of the affective taxonomy, and would indicate that Bret is operating at Krathwohl's `"organizational" level as he is able to discuss, to examine and to formulate.

Conclusions

Any conclusions from this study must be treated cautiously. A major problem with the methodology used is that once the question was asked about reflection (however the question was expressed) the researcher had begun to interfere with the process. In this respect two important questions remain unanswered. First, does asking about reflection encourage reflection? Second, had the concept of reflection not been introduced would reflection have still taken place, and if so, how would the investigator know?

That said, the following four assertions can be made with some confidence because they are based mostly on observations rather than interviews:

1. The leaders gave some feedback, but did not actively encourage reflection among the participants.

2. There was a strong degree of aversion to "formal" teaching and learning within the leader group. There was also a strong emphasis among the leaders on making the activities enjoyable and fun.

3. Although reflection was not encouraged, there was evidence to suggest reflection was happening spontaneously among many participants. There was observable evidence of dialogue between participants, which centred upon their experiences and most participants said they had thought through or thought about their activities.

4. Most often this reflection began soon after the experience, on walks back from the activity areas.

Future work

Clearly, such a small-scale case study can only point out a direction for future work. This leads to a number of important questions, which beg further research

1. Are the findings from this case study likely to be replicated in other settings? Can we establish the extent to which the Kolb cycle as adapted and propounded by Exeter (2002) is employed outside of the Outward Bound setting?

2. Is reflection a natural developmental process and, if so, are some individuals more likely than others to be natural reflectors?

3. Is reflection any more or less likely to occur in an outdoor environment than elsewhere? Others have shown the outdoors can have a powerful influence on

the activities of the brain. For example, Hattie et al. (1997) say the outdoor environment is highly important in explaining the striking effect gains of their meta analysis of Outward Bound programmes. This is supported by the work of Paffard (1973) who, in a study of spiritual-poetic experiences in 17 – 21 year olds, found a significant number of transcendental spiritual experiences took place outdoors.

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