

Sail training as education: more than mere adventure

K. McCulloch*, P. McLaughlin, P. Allison,
V. Edwards and L. Tett

University of Edinburgh, UK

This paper describes the process and findings of a multinational study of the characteristics of sail training for young people. The study used a structured qualitative method and involved ‘indigenous practitioner-researchers’ who collected the majority of the data. Our findings show that participation provides an opportunity for learning in the practical and cognitive domains in relation to skills and knowledge, and in the affective domain in relation to social confidence. The data collected provide evidence that sail training has positive benefits in terms of participants’ social confidence and their self-perceptions of capacity to work collaboratively with others. It is argued that while sail training experiences are generally positive and beneficial, some appear to be more effective than others in developing social confidence. We also show that it is not principally the seamanship dimension of the experience, but the combination of a structured purposeful programme with the unique character of the seafaring environment that provides the basis for that learning. The more effective experiences in this respect appear to be those where there is a greater emphasis on specific programme activity. Sail training should therefore be understood not solely as adventurous recreation but as a powerful educative experience.

Introduction

This paper discusses a study of sail training that was conducted between summer 2005 and spring 2007, commissioned by Sail Training International, to investigate the range of purposes and beliefs about the benefits of participation in sail training for young people. The study is of interest to a wider audience than the specialist fields of outdoor and adventure education because it illuminates the kinds of learning that participation in such programmes can promote. Modern sail training has emerged during the second half of the 20th century and has spread from its emergence in northwestern Europe to many countries around the world.

*Corresponding author. The University of Edinburgh, Paterson’s Land, Holyrood Road, Edinburgh EH8 7DR, UK. Email: ken.mcculloch@ed.ac.uk

The term 'sail training' itself is contestable; we use this terminology to encompass a range of practices that are variously referred to by their advocates as youth sailing, youth work at sea, adventure sailing and sail training. The choice of *sail training* is based on its broad currency as a label that can be understood to include considerable diversity. Many if not most sail trainers will say that they are not principally concerned to train young people as sailors, although that may be a by-product of the work. The essential features are the use of sailing vessels of a size which can accommodate a group of young people and one or more staff living aboard for a period of time spent at sea, normally but not always exclusively under sail power, and motives that give priority to the trainees' development as people in some way. The experience may have as one of its outcomes the learning of sailing and seamanship skills but to qualify as sail training this need not be the primary purpose.

Sail training might be said to provide a context for learning, but to form only a modest and perhaps not ultimately very significant part of the content of that learning. Alfred Holt, co-founder of the first Outward Bound 'school' at Aberdovey, Wales is quoted as advocating 'less a training *for* the sea than *through* the sea' (Miner, 1990, p. 59) (italics in original). There are within this general definition many significant differences to be understood. These can be seen as arising from different conceptions of purpose, and are manifest in features such as the types of vessel used and in the culture and practices characteristic of particular approaches. The smallest sail training vessels are yachts of around 10m/35ft length, carrying perhaps two staff and four or five trainees, and the largest are ships of 60m/200ft or more carrying twenty or more staff and more than one hundred trainees. Size is not the only dimension of difference to be considered; the technologies by which sailing vessels operate range from traditional to very modern with many steps between. Alongside consideration of the several variables that the vessels themselves embody, the significance of the particular waters sailed, length and duration of voyages, and weather conditions experienced all contribute to the variety of experiences available to participants.

Previous research on sail training includes a number of studies at the level of individual voyages and operations. Gordon *et al.* (1996), for example, offer an account of a study of one group of seven trainees who participated, as 'Blue Watch' in a sail training voyage on *STS Leeuwin* based in Western Australia. The analysis of benefits to participants focused on notions of self-confidence, self-esteem, motivation, tolerance and the opportunity to display talents; negative outcomes were not considered although the 'data summaries' for individuals did indicate some unmet expectations and resistance to aspects of the voyage programme. Purpose was construed in terms of these benefits and the trainees were characterised as marginalised in various respects. A related approach was pursued by Grocott (1999) in a study of the effect on self-concept of a ten-day voyage. These studies sit clearly within the mainstream of the research literature on outdoor education. Like Brown & Simpson (1976) and Armsden (1995), for example the focus was predominantly on individual change and on psychological measures. This is consistent with Barrett & Greenaway's (1995) findings regarding the dominance (at least until quite recently) of psychological, measurement-based approaches in outdoor education research.

Hamilton (1988) provides some useful background to the development of European sail training but the account is descriptive rather than critical. The largest previous study is an ethnography of sail training in the UK (McCulloch, 2002), which examined the practice of several major operators. There has been no previous study examining practice across dimensions of nationality and vessel type, although the survey of sail training operators undertaken about 1999 (Hunter *et al.*, undated) provides some useful contextualisation in respect of vessel types in use and numbers of trainees carried. Most recently a collaborative project by the University of Sydney and the Young Endeavour Youth Scheme (Finkelstein & Goodwin, 2005) reported on a study of participants in a single programme. This is one of the larger studies of a single sail training operation, and focused particularly on social capital formation as an outcome, and on gender as a theme in relation to the construction of leadership and collaboration. Our project is therefore the largest and most wide-ranging study of sail training to date.

Our study was focused on programmes for teenagers and young adults, using voyages of 5–15 days' duration on vessels ranging from large square rigged ships to small yachts. The study took place in a range of national cultures, in Europe, North America and Australasia. It became clear during the process of negotiating involvement by operators that any conception of a 'mainstream' of sail training was not supported by evidence from our enquiries of potential participants. The model of short voyage sail training using voyages of one or two weeks' duration was not universally accepted. In North America particularly there are a significant number of operators running programmes based on several months at sea. Specialist programmes for young people judged to be 'at risk' or to have been involved in offending or other deviant activity are also widespread, as are organisations including some schools who use sail training as one element in a more comprehensive programme. The selection of cases in this study sought to exclude such programmes in an effort to eliminate sources of variation other than those directly associated with the practice of sail training. Inevitably these boundaries are never clear-cut and some of our cases had some characteristics of such specialist programmes.

Research methodology and design

The project used a structured qualitative approach. The questions investigated concerned the social nature of the experience and the purpose or purposes that are being served by sail training. Descriptive, meaning-oriented work (Davidson, 2001) and theory-building is required alongside and as part of any attempt to 'test' the 'effectiveness' of sail training given that the purposes of sail training vary between operators and vessels. A key imperative in reaching an understanding of these questions of nature and purpose is to 'examine situations through the eyes of the participants' (Cohen *et al.*, 2000, p. 137), see also Allison & Pomeroy (2000) specifically in relation to outdoor and experiential education.

The key research questions for this study were concerned with young people's expectations, experiences of and reflections on sail training and so the claims made

here involve improving understanding, developing conceptual ideas and their practical implications.

The specific research questions that were developed as the basis for the research design were:

1. What benefits and effects do participants anticipate from their experience and what influences those expectations?
2. To what extent do participants experience these benefits and effects as being achieved?
3. To what extent do participants experience unanticipated benefits and effects?
4. What, if any, specific identifiable changes in participants' views of themselves are evident between the beginning of a voyage and two to three months after the voyage?
5. What are the key differences between sail training programmes? Do differences such as type of vessel used, voyage characteristics, ideology and programme characteristics lead to differing purposes and outcomes? If so what are the significant differences?

A structured interviewing approach developed from methods used in an earlier study of sail training in the UK (McCulloch, 2002) was used to elicit trainees' motives and expectations. The interviews also used a self-assessment scale to explore trainees' own judgements of their social confidence at the start of voyages, and then again in a post-voyage interview. Interviews took place during sail training voyages and approximately three months after the voyage ended. It is important to note that although the interview data were coded and analysed using statistical methods this is still interpretive research in the interactionist tradition.

The research fieldwork drew on tested methods and techniques, applied in new ways in a new context. A key problem in researching sail training is that of access, both in the physical sense of placing researchers on ships, and the cultural sense of having fieldworkers able to operate within a particular linguistic and technical culture. We therefore recruited a cadre of 'indigenous practitioner-researchers' as associates in the project. The rationale for recruiting and training associate researchers was based on both logistics (cost) and pragmatics (berth space). It seemed practically wise and cost effective to use associate researchers for data collection, and the majority of the fieldwork was carried out by associates from within the participating organisations, drawn from among volunteer or paid staff.

Each participating operator provided one or two people who would be associate researchers. These associates were required to be competent in spoken and written English. They were trained to conduct interviews in the indigenous language of their sail training setting, and to provide reports of those interviews and observations in English. A small number of voyages also used research assistants with appropriate skills recruited from among our own postgraduate students. A key preoccupation of the training was language and the development of appropriate strategies for working in languages other than English that would nevertheless generate reliable (and/or valid) data. The fieldwork was conducted in several varieties of English (UK, Irish,

American, Canadian, New Zealand and Australian) as well as in Spanish, Dutch, Polish, Norwegian, Swedish and French.

The training event brought together 25 volunteers from the participating sail training operators for a long weekend in Edinburgh in March 2006. This provided a vital opportunity both to develop a common approach to data collection activities and to refine the fieldwork instruments. Associates offered many valuable insights and suggestions in relation to the fieldwork and the study more generally, which made the project genuinely collaborative rather than being wholly directed from the centre. Following the training event substantial revisions were made to the fieldwork instruments, guidance documentation for associates, and the information sheets for participants, the latter in localised language versions as required. A fuller account of these practical, methodological and ethical aspects is intended to be the subject of a separate publication.

The methods of interviewing and observation are well known and understood and have been used in several previous studies of sail training. In this case we developed interview and observation frameworks based on previous sail training research in the UK (McCulloch, 2002). A pilot study, involving two voyages aboard vessels operating on the western coasts of Canada and Sweden, was undertaken during September and October 2005. This provided the opportunity to test and refine a structured interviewing approach and frameworks for observation for use in the main study. These findings allowed us to provide lists of 'pre-coded' common responses to simplify the recording of interview responses. Data were collected under the four categories of: early voyage interviews; general voyage reports to provide context; focused observations of a range of activities and situations aboard each vessel; and post-voyage interviews. Structured data were collected in order to provide a uniform framework for associate researchers to use and to simplify analysis of a large data set. The observation data and voyage reports provided the basis for drawing out similarities and distinctive characteristics among the cases included in the study.

This approach adequately resolves the problem of comparability between data collected by a number of fieldworkers with varying degrees of expertise. There is, however, a price to be paid, in that the richness of the data, and the confidence we can have that the data truly reflect participants' experiences, is somewhat compromised. In order to minimise the extent of that compromise the interview recording instruments also included space for verbatim notes of participants' actual words, and these were helpful in the analytic process. The post-voyage interviews are subject to a similar caveat because of some variabilities in the ways they were conducted. The 'default' procedure was to undertake these interviews by telephone. Some, however, were undertaken using email communication or in a few cases face-to-face interviews, and we are conscious of the possibility that these different modes of interaction may have had some influence on the data. Given the structured nature of the interview and the consistencies in the data we are confident that this is a relatively minor issue and confidence in the overall findings remains strong.

There are a number of ways of measuring self-confidence including assessments of psychological health, such as the Rosenberg self-esteem scale (Rosenberg, 1965).

The research team sought a straightforward means of measuring change over time that would not be too intrusive into personal aspects of trainees' lives and would not take long to administer. We used a modified version of a confidence scale developed in adult literacy research (Tett *et al.*, 2005). We were concerned to elicit trainees' own judgements about their confidence in social situations, both because of our methodological stance and because the social dimension is clearly salient in many of the claims made for sail training. We have described what we are examining as *social confidence*, to distinguish the concept from more psychological constructs such as self-esteem.

Our method for measuring confidence picked out scenarios grounded in situations that young people anywhere could face in their everyday lives. The scenarios asked how confident trainees were when: meeting new people; getting on with a group of strangers; speaking in a group; complaining about problems; taking on a leadership role; dealing with conflict in a group; dealing with authority figures; working cooperatively with others to achieve a goal; understanding other people's points of view; and speaking up in a formal meeting. Responses to each scenario were allocated a score with 0 representing very uncomfortable and 4 very comfortable and these scores were calculated for each trainee and subjected to various analyses. An ideal design would have this social confidence measure applied prior to participants' arrival aboard. There were good practical reasons for not attempting to achieve that in this study. Given also that previous work (McCulloch, 2002) had shown that several days aboard are required for new participants to adjust to life aboard ship, we did not regard the timing of these interviews as problematic. Our finding in respect of differences between naïve and experienced sail training participants supports the view that little if any difference would appear in data from 'pre-voyage' interviews and those conducted in this study in the first few days of a voyage.

Fieldwork

This study collected a large amount of data from a selection of organisations. Vessels included in the study were selected based on key dimensions of difference defined as national context, type and size of vessel. Following a presentation of the research design at the Sail Training International (STI) conference in 2005 a number of operators came forward volunteering their participation. The model of *traditions* in sail training (McCulloch, 2004, p. 194) was used to define a range of different approaches and styles in sail training. This model distinguishes between approaches to sail training based on their distinctive origins and the choice of particular types of vessel. While there is some basis for the view that more is better, we were confident from the start that an appropriate range of variances could be evidenced by a sample of between 10 and 20 voyages and approximately 150–200 trainees; the research design called for 30 voyages and 300 trainees as targets.

The achieved range eventually included seven larger vessels, ten medium sized and three smaller vessels, distributed across the world in a pattern close to the range sought. The approach to case selection was intended to represent the range of

different types and sizes of vessel. Numbers of trainees were used as a simple indicator and the ranges chosen were based on previous studies and on advice from STI representatives. Within each voyage individuals were selected for interview on a representative basis to reflect the composition of the particular trainee group as closely as possible.

The participating vessels and their regional affiliations were:

Large vessels	<i>Statsraad Lehmkuhl</i>	Norway
	<i>Pogoria</i>	Poland
	<i>Belem</i>	France
	<i>Eendracht</i>	Netherlands
	<i>Spirit of New Zealand</i>	New Zealand
	<i>Alexander von Humboldt</i>	Germany
Medium vessels	<i>Atene</i>	Sweden
	<i>Asgard II</i>	Ireland
	<i>Pacific Grace / Pacific Swift</i>	Canada
	<i>Playfair / Pathfinder</i>	Canada
	<i>Irving Johnson / Exy Johnson</i>	USA
	<i>Young Endeavour</i>	Australia
Small vessels	<i>Albanus</i>	Åland Islands
	<i>Rona II</i>	UK
	<i>Alba Venturer</i>	UK
	<i>Tante Fine</i>	France
	<i>Spirit of Massachusetts</i>	USA

Although we are confident that the cases included in the study represent an appropriate range, there is a caveat in relation to the representativeness of these cases. A survey of sail training organisations (Hunter *et al.*, undated) suggests that the most common model of sail training uses modest vessels carrying a dozen trainees and four or five staff. Such vessels are somewhat under-represented in our study if they are in fact the commonest type of sail training operation, although caution is required given uncertainties regarding those survey data.

Data were collected on a total of 35 different voyages during 2006. Interviews were conducted with 325 trainees at the beginning or very early in their voyage and again approximately three months afterwards. As anticipated it was not possible to make contact with all the trainees originally interviewed; 173 interviewees were successfully contacted for a second interview. Achieving a second interview with 53% of those originally included gives good grounds for confidence in the findings.

The achieved sample of interviewees was adequately representative in terms of the range of vessels sailed, age, sex and prior experience. Of the overall range of participants 51% were male, 49% female and almost 90% of the sample were aged 14–21 years. The assumption is that this is true also of the population. Associates were briefed to select participants for interview to represent, as far as they were able, the range of variance in terms of age and sex in the particular voyage group. This aspect

of representativeness has to be taken on trust and we have no reason to doubt that those included were other than a reasonably representative sample at both voyage case level and in the study as a whole.

Thirty-four voyage reports were received from 17 vessels. A further vessel provided interview data from one or more voyages but the associates concerned were unable to complete the observation and voyage report elements of the study, and three vessels were unable to contribute any data. A total of 158 'instances' of observation were returned. The richness and volume of the data returned was quite variable. This is much as we had anticipated given the demands of work as a member of staff aboard any sail training vessel.

The interview data were coded and reduced to statistical form. It is important to emphasise that although data have been analysed statistically they are nevertheless qualitative data about participants' understandings of their own experiences. Claims about the meanings that can be attributed to the patterns evident in the data need to be understood with that in mind. The voyage reports were analysed using a staged qualitative analysis process, initially identifying first-order categories such as sail-handling, formal instruction and social activity. This simplified comparison across the range of cases and enabled the generation of second-order analytic categories such as relationship style and programme characteristics.

There are a number of possible criticisms of this research design. The use of such a range of fieldworkers and the variety of contexts and languages involved presents a problem in relation to the comparability of the data. It might also be thought that such fieldworkers would have an interest in portraying their vessel or organisation in a positive light. While it would be naïve to discount such concerns entirely, we are confident that these matters were adequately addressed. The training event gave the whole project team including the associates a degree of understanding and the confidence that a systematic and consistent approach was both necessary and achievable. In relation to the second point—the honesty of the accounts—in many instances giving a critical account of problems and difficulties arising during particular voyages was a notable feature of the data.

Findings

Participants offered a variety of reasons for their participation. The most frequently cited reasons were having had a previous positive experience, ideas of challenge and novel experience, meeting new people, and a general interest in simply being at sea and experiencing a seafaring or maritime environment.

It was noted that almost half of all trainees had some prior sailing experience, in yachts, dinghies or sail training vessels. Even when those with prior sail training experience are discounted, the proportion with some related experience is still more than one-third. We can, therefore, say that for significant numbers of our informants there is some basis in their prior experience and knowledge for their expectations of their voyage. Assigning trainees to 'naïve' and 'experienced' categories specifically in relation to previous sail training voyages is possible and does reveal some differences.

It is also important to recognise a continuum of experience from total seafaring novices on the one hand, to those with experience of multiple sail training voyages, and many intermediate positions, particularly where trainees may have had some previous experience of the sea.

Asking trainees about the most important of their often multiple reasons for choosing to participate, we find that ideas of challenge and enjoyment were salient, with over one third citing one or the other as their key motivation. Meeting new people, experiencing life aboard ship and learning to sail were the next most significant motivations at around 10% of trainees in each case.

Trainees presented a range of positive and negative features in respect of their expectations and anxieties about participation. Seasickness was the most commonly anticipated concern, with almost half of the 'naïve' trainees and a quarter of those with prior experience expressing some concern in this respect. Anxiety about working at heights was common but only among trainees setting out on voyages in wholly or partly square-rigged vessels, suggesting that trainees have a good understanding of what may be required of them. Expectations and anxieties do not appear to be correlated by age, sex, or nationality (as defined by vessel). There is a small effect in some areas (e.g. girls are more likely to express anxiety on some measures), but the sample size is too small to draw any meaningful inference.

Factors cited as generating positive anticipation included excitement or adventure, making new friends and going to new places as well as being at sea and observing marine wildlife. Working at heights is also noted as a positive anticipation factor. This gives confidence in the findings as a whole because the complexity and ambivalence of people's feelings is revealed; on the one hand people feel anxious about the prospect of working aloft but they also experience positive anticipation. This finding from the interview data is borne out by observation, for example in one case trainees were described discussing the experience of being required to go aloft to stow a topgallant sail (a sail set high on the mast of a square-rigged vessel) in a rising wind. The experience was very clearly one that produced a complicated set of responses among those trainees both individually and as a group.

In the post-voyage interviews participants were asked to consider which of the specific expectations they had cited in their first interview, which were read back to them by the interviewer, they felt had been met. It was clear from these data that the single most important aspect for trainees is the social aspect of being with a group and forming new friendships. Alongside that, the aspects of teamwork and maritime life also appear significant, as does the challenge dimension. It is also clear that alongside these common responses there are several other factors cited by smaller numbers of participants. These are less significant in the sense that they are less common, but as the most important aspect of some individuals' experiences they nevertheless carry some weight.

A high proportion of trainees experience their expectations in respect of technical skills, teamwork, and friendship as having been met. With regard to confidence we see a sharp and highly significant difference between participants with prior sail training experience and novice trainees. This feature is also found in the data from

the *confidence scales* explored further, below. As an additional test of the question trainees were also asked if there were any of their specific expectations that had not been met. Novice trainees were almost entirely satisfied that their expectations had been fulfilled, with only very small numbers reporting that, for example, their expectations regarding technical skills and teamwork had not been met.

Regarding more general ways in which trainees saw the experience of participation as having impacted on their lives, the question of confidence was raised by a number of trainees, both in relation to social relations and to trying new experiences. A modest number of trainees also talked about the desire to have further seafaring experience, either as a possible career or on a recreational basis.

Comparing pre-voyage reports of anticipated experiences and anxieties with post-voyage evaluations of positive and negative experiences throws up some interesting and unexpected findings, particularly in relation to pre-voyage concerns. Almost one-quarter of participants expressed some anxiety about working at heights. Post-voyage, however, no one mentioned this as a negative experience and a small proportion reported this as one of their positive experiences. A similar pattern is evident with other anxieties such as taking responsibility and concerns about foul weather. Overall, none of the pre-voyage concerns figure as strongly as negative post-voyage experiences, not even seasickness. Anxiety in this regard was expressed by 40% of participants at the start of their voyage, but seasickness is mentioned by just 13% post-voyage. The only concern that is strongly reflected in the post-voyage experience is that related to personal discomfort. Around 13% of participants had some concerns about personal comfort, but close to one-quarter reported this as a negative experience post-voyage.

Several of the questions discussed above throw some slightly indirect or inferential light on the ways participants' views of themselves had changed through their participation. The most important feature of the study in this respect is the confidence measure which used a multi-item scale to assess changes in trainees' own assessment of their confidence between the beginning of their voyage and a point some three months later. As noted earlier this is a measure of social confidence rather than a psychological measure of self-esteem.

Only descriptive statistics were used, except in the analysis of confidence scales data where Confirmatory Factor Analysis was used. We also used repeat measures t-test to explore differences in pre- and post-voyage confidence. This pointed to a significant effect on aggregate scores. The effect is also significant in all of the individual measures with the exception of one—'Understanding other points of view'. The message is very different, however, if we control for previous experience: only four of the ten confidence scale items show a significant effect for those with experience.

Analysis of the changes in trainees' assessments of their own social confidence consistently shows that there is an increase in this measure between the beginning of a voyage and three months later. This effect is found to various degrees across the range of vessels and voyages in the study and does not appear to have a particular relationship with aspects such as size of vessel or rig type. Moreover, differences on

this measure between naïve trainees and those with previous sail training experience indicate that, in the context of this study, the increase in confidence appears more lasting than transient. We find good grounds in this evidence for saying that young people consistently experience increases in their sense of confidence about themselves and their dealings with the world, following participation in sail training voyages, and that for some participants these changes are lasting. That is not to say that an unequivocal causal link between this growth in confidence and participation in sail training has been established, the finding being indicative rather than conclusive. Many factors impact on young people's lives during late adolescence and teasing out the significance of any one factor is problematic.

The most significant feature of the findings uses the confidence measure and descriptive data to explore differences between sail training programmes and it is to this aspect that we now turn.

Key differences between sail training programmes

There are two distinct aspects to the findings in relation to this question. First, some analysis of the descriptive data from voyage reports and observation is necessary.

One feature that showed considerable variation was what is considered to be appropriate and adequate staffing. Several distinct models were evident in the voyage report data which included summaries of the number, roles and qualifications of seagoing staff. An important distinction is between paid professional and volunteer staff. It is important to note that 'volunteer' staff appear no less likely to have had appropriate training and certification, the distinction being between those who work in sail training as their main source of income and those who have other occupations. The criterion for this judgement regarding training and certification was to apply the standards in the UK Code of Practice for The Safety of Small Commercial Sailing Vessels (Department of Transport, 1993) with allowance for different national certification schemes and requirements. The variation ranged from the extremes of vessels which employ a relatively numerous professional crew capable of operating the vessel safely with minimum input from trainees, to those operated by entirely voluntary staff all of whom had principal occupations outside seafaring.

These different staffing arrangements were also linked with other factors. Smaller vessels in the study were more likely to have more voluntary staff and the largest vessels were generally those with the all-professional crews. Larger vessels also undertook longer voyages with fewer intermediate stops. They did not, however, appear strongly associated with differences in approach and ethos in relation to the conduct of relations between staff and trainees. From the trainee perspective most staff in most sail training practice seem to approach and conduct their work to similar standards whether paid or unpaid.

Turning to the detailed observation data, the most striking feature of this material is how similar life is aboard sail training vessels of whatever nationality. We asked associates for observations of a range of events and activities aboard their vessels and most succeeded in doing so, with 158 individual instances of observation recorded.

Some caution is necessary in the interpretation of these data. The wide variation in the volume and quality of data from different associates means that comparisons within and generalisations from the data are subject to a caveat in relation to representativeness. Some broad conclusions can nevertheless be drawn.

Arrivals and departures showed varying degrees of routine and system, and varying degrees of formality in the approach of staff welcoming and directing trainees aboard. Trainees arriving were commonly described in terms that suggested uncertainty in dealing with the novel context. Departure days were also described in similar terms but with the emphasis on the emotional content of leave-taking from those who had formed bonds during the voyage.

Two types of formal gathering were evident in the data. *Meetings and briefings* involved whole ships' companies in most vessels but also briefings by watch, possibly more common in (but not restricted to) larger vessels. *Specific formal technical instruction* included briefing for contingencies, mainly related to safety, and giving of instructions for specific tasks such as sail setting and stowing and tacking drills. The main differences were in the degrees of formality used. This was strongly associated with vessel size and numbers of trainees, with a strong tendency toward more formal approaches in the largest vessels.

Aspects of domestic life included *meals and cooking* as well as *general domestic life*. These aspects are distinguished by being quite independent of 'sailor-work' and in some respects no different from what would be required in any communal living situation. As has been argued elsewhere (McCulloch, 2007), these features of life at sea do nevertheless have a distinctive character. The current data show differences in the extent to which domestic activity is formally structured through the division and allocation of labour. Larger vessels (and some not so large) with a designated cook tend to operate more structured arrangements with fewer opportunities for choice and spontaneity in relation to trainees' engagement with these tasks. Eating arrangements also reflect varying degrees of hierarchy through a range from entirely communal, to separate tables for different groups of staff and trainees to some vessels where the staff and trainees' meals are physically separated in different mess areas.

The broad category of 'sailor-work' included both *sail handling* as a distinct category and *general seamanship activities* including steering and lookout duties, launching and recovery of small boats, picking up and leaving moorings or anchorage. The striking feature here is the similarity of descriptions across the range of cases. Sail handling clearly differs in complexity from simple Bermudan rigs to gaff and square sails. The descriptive data focuses on communication and coordination whether that is simply about 'heaving together' or the more complex coordinated work of several groups of people setting a sail or sails. Working at height is clearly an important distinction and there are several accounts of trainees discussing their attitudes to and coping strategies for what is perceived as risky and challenging work.

Three main dimensions of difference are identifiable from these data. First there is the question of relationships among staff and between staff and trainees. These vary from formal or authoritarian styles to more participatory approaches allowing greater freedom in relationships. At the level of structure, understood as those elements such

as the allocation of space and the designation of formal titles, more hierarchal or more egalitarian structures are evidenced by different degrees of emphasis on aspects such as the eating arrangements, the extent to which different spaces within the vessel are open to trainees or restricted to staff, and the use of titles among staff. Previous work on sail training in the UK (McCulloch, 2004) had shown that the extent of trainees' involvement in decision making during voyages was a very important difference, but data in the present study do not provide the basis for further conclusions in this respect. There is a tendency towards a more structured environment aboard larger vessels but not necessarily to more formality. Formal and authoritarian approaches seem to be just as common or unusual aboard smaller vessels as on larger. We explain this formality dimension as the expression of different cultures or traditions, and it appears distinct from those structural differences arising in part from the greater complexity of organising communal life for larger groups of people.

The third dimension of difference is the extent to which structured, purposefully educational activities and reviewing of learning are used. There were two vessel cases where it seemed that most aspects of the programme were planned to maximise the potential for trainees' learning in a conscious and intentional manner. By contrast there are some cases where the emphasis appears to be almost entirely on letting the seafaring experience itself provide the basis for trainees' learning. We would characterise these different approaches as *personal/youth development* programmes on the one hand, and as *maritime heritage* programmes on the other.

Analysis of the impact of the different vessel programmes on changes in confidence, as measured by the confidence scale, showed an overall positive change, and inspection of the mean differences between pre-voyage and post-voyage scores suggests that the effect is greater in some vessels than in others. Vessel 17 shows the highest change, and analysis of variance also indicates that there was a large effect for vessel 17 on four items: meeting new people; taking a leadership role; working cooperatively; and speaking in a formal meeting. Vessel 17 demonstrates the most purposefully structured programme of any in the study, with a consistent effort to develop trainees' capacities to collaborate and problem-solve. This extends to organised beach-games and other activities both ashore and aboard with varying degrees of connection to seafaring. In this programme (and in others to a certain extent) we also see a systematic and progressive development of trainees' collective autonomy, with trainees put in supervised control of all aspects of running the ship, after about eight days aboard.

Drawing the descriptive data and the interview analysis together in relation to this issue reveals a clear relationship. We find a clear and positive relationship between the extent of changes in participants' social confidence, and the extent of purposeful structuring of the educational programme operated in the vessel.

Conclusion

Trainees come to the experience with a range of expectations many of which are common across the range of national cultures and sail training traditions included in the study. These include a social dimension concerned with meeting new people,

making friends and working in a group or team. Alongside that there is a widespread interest in simply having some experience of a maritime environment and seafaring. The third area of common expectation is to have to deal with some kind of personal challenge, widely anticipated as an intrinsic aspect of a sail training experience.

It is also important to note that expectations include anxieties (the commonest regarding seasickness). Several of the previous studies have made seasickness a focus of concern. Finkelstein & Goodwin (2005) argue that the shared experience of seasickness is an important element in forming bonds among the trainees. This study does not address experiences of seasickness in depth and detail, but our findings are not inconsistent with that view and this might warrant further investigation.

Trainees across the study ascribe positive value to their participation. Not only that but the differences between naïve participants and those with prior sail training experience lead us to believe that, for some participants at least, the benefits of the experience are durable rather than transient. Comparison of the confidence scale measures show most experienced participants to be as socially confident at the start of second or subsequent voyages as naïve trainees are following their first voyage. This is strongly suggestive that for those trainees the increase in social confidence is a lasting effect.

The most significant conclusions are about the benefits that trainees experience. It is clear from the data that participants respond in overwhelmingly positive ways to their sail training voyages. Sail training does more or less what its proponents claim. Trainees develop confidence in themselves, they develop their capacity for teamwork and they develop technical skills. Anecdotal evidence suggests that similar features may also be observed among young people who go to sea in motor vessels for various purposes, and that the seafaring technology in use may be of only limited significance. The current study indicates that trainees' views of the experience are broadly similar whether they go to sea in a full-rigged ship or a smaller boat, whether the rig is modern or traditional or whether the staff are all volunteers or all professional seafarers. It appears that it is going to sea that counts for far more than possible differences of approach and style. Perhaps most strikingly of all in the context of this detailed first cross-national study of sail training practice we find little difference between the kinds of experiences reported in the accounts of participants from the range of countries included in the study.

As has been argued in greater detail elsewhere (McCulloch, 2007) it is helpful to conceptualise a ship at sea as a kind of total institution. It is the uniquely impermeable boundaries created by a ship at sea that both define sail training and give it its particular power as an experience. The evidence in respect of inescapability, of the routinisation and interdependence of life aboard and of the imperative driving learning of new ways of physically being in order to manage daily life, strongly support the view that it is the institutional character of the environment that must lie at the heart of any systematic explanation of the sail training experience.

As the concluding section of the findings above demonstrates, however, considerable significance also attaches to the overall character of the programme. We can confidently say that while sail training experiences are generally positive and beneficial, some appear to be more effective than others in developing social

confidence. The more effective experiences in this respect appear to be those where there is a greater emphasis on specific programme activity designed to develop trainees' skills and understanding. The combination of a structured purposeful programme with the unique character of the seafaring environment provides an educational context with particular power and potential.

If the purposes of sail training are specifically concerned with learning and development, programmes with a more structured educational approach provide a more effective experience. That is not, however, to say that programmes with what we would characterise as a 'maritime heritage' approach, where the emphasis is much more on the experience of seafaring, unmediated by preoccupations with social and personal development, are not worthwhile and effective in their own terms.

Sail training cannot on this evidence simply be treated as an adventure. There is clear evidence of various educational purposes and expectations in both sail training operators' accounts of purpose, and in participants' own stories. Our findings show that participation provides an opportunity for learning in the practical and cognitive domains in relation to skills and knowledge, and in the affective domain in relation to social confidence. There is good reason to believe that similar effects may be present in a much wider range of unconventional educational contexts including wilderness expeditions and other types of outdoor and adventure education programmes. Sail training is claimed by its advocates to have a clearly educational focus and this is evidenced in the growth, chiefly in the USA and Canada but also in Scandinavia, of longer term educational voyage programmes. Although such ventures fall outside the scope of our study they provide further potential evidence in support of a view that treats such work not as peripheral to the mainstream concerns of educators but as a fruitful learning environment with clear benefits for participants.

Notes on contributors

Pete Allison is a lecturer in outdoor education at the University of Edinburgh. He has written and researched over a number of years on youth expeditions in remote areas.

Vivien Edwards has a background in marine biology and works as a research officer in the Department of Higher and Community Education at the University of Edinburgh.

Ken McCulloch is a senior lecturer in community education at the University of Edinburgh and has written and researched extensively on youth work, community education and sail training.

Pat McLaughlin is a senior lecturer in the Department of Education and Society at the University of Edinburgh. He has undertaken research in a wide range of educational contexts especially the evaluation of outdoor and adventure education programmes.

Lyn Tett is Professor of Community Education and Lifelong Learning at the University of Edinburgh and has research interests in non-compulsory education, gender and education, and literacy.

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