



The Characteristics and Value of the Sail Training Experience

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Report of a study conducted by the University of Edinburgh on behalf of Sail Training International

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Foreword

This independent study into the value and effectiveness of sail training was commissioned by Sail Training International and its member national organisations around the world. It was conducted by the University of Edinburgh.

Commissioning the study was in some respects an act of faith. It was based on a conviction that the wealth of anecdotal evidence available to us from sail training operators around the world, and the few formal studies conducted, would be validated by much more comprehensive global research.

The principal findings

In a sentence, the study shows that sail training does what it claims to do. Perhaps the four most important findings are:

- Young trainees who participate in off-shore sail training programmes show measurable improvements in social confidence and their ability to work with others ... and the benefits are sustained over time after the voyage experience.
- The most common reasons for young people wanting to participate in a sail training voyage are the anticipation of adventure, making new friends, seeing new places and conquering their fear of heights ... with seasickness, a fear of heights, and a concern about being among strangers in a confined space the main anxieties.
- The positive value of the sail training experience transcends national and cultural boundaries and is not much influenced by the size or rig of the vessel.
- The most effective sail training experience in developing social confidence and teamwork skills is delivered by vessel operators who offer well structured educational programmes ... the more emphasis there is on defined and purposeful activity relating to these goals, the more successful the programme is in those terms.

About the study

We selected the University of Edinburgh for this project following an evaluation of proposals from a number of institutions in North America, Europe and Australasia. We were particularly attracted by their international reputation for research on education in non-formal settings including the outdoors, and the method they proposed to use.

Fieldwork for the study was conducted in the middle months of 2006 with follow-up interviews towards the end of the year and early 2007. The participating vessels were selected by the University of Edinburgh. The study involved observations and interviews with more than 300 young trainees (aged 15-25) on 34 voyages of 5-15 days duration on 17 sail training vessels of different sizes and rigs from 13 countries around the world. Observations and interviews were conducted before, during and up to six months after the voyage. Field work was conducted by 'indigenous researchers' from each of the participating countries following an intensive training programme organised by the University of Edinburgh. Analysis of more than 1,000 field-work reports was conducted by five of the University's Moray House School of Education faculty.

Thanks

Our thanks go to those who participated in the study, to the University of Edinburgh and particularly to the team of volunteer research associates who collected most of the data.

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Introduction:

This report sets out the approach, methods and findings of a study of sail training conducted between summer 2005 and spring 2007. The study was commissioned by Sail Training International in response to a perceived lack of research, to provide data of value to sail training operators worldwide, by commissioning independent research into the effects of sail training on young people.

The purpose of the study was:

To investigate the range of purposes and beliefs about the benefits of participation in sail training for young people. Participants' experiences and beliefs will be interrogated and conclusions drawn as to the impact of participation on their lives and development. The study will seek to distinguish key dimensions of difference in the nature of sail training programmes and to identify relationships between approaches and outcomes. (Allison, P. & McCulloch, K 2005)

Previous research on sail training includes a number of studies at the level of individual voyages and operations, for example Gordon, et al. (1996) offer an account of a study of one group of 7 trainees who participated, as 'Blue Watch' in a sail training voyage on *STS Leeuwin* based in Western Australia. The analysis of benefits to participants focussed 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 marginalized in various respects. A related approach was pursued by Grocott (1999) in a study of the effect of a ten-day voyage on self concept. These studies sit clearly within the mainstream of the research literature on outdoor education. Like Brown (1976) and Armsden (1995) for example the focus is very much on individual change and on psychological measures.

Hamilton (1988) provides some useful background to the development of European sail training but the account is descriptive rather than critical. The largest multi-operator study we are aware of is an ethnography of sail training in the UK (McCulloch 2002). There has been no previous study examining practice across dimensions of nationality and vessel type, although the survey of sail training operators undertaken in or 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 and 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. This current project is therefore the largest and most wide-ranging study of sail training to date.

The study was focussed on the 'mainstream' of sail training, defined as programmes for teenagers and young adults, with declared philosophy and purpose, 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 this conception of a 'mainstream' of sail training was not fully supported by evidence from our enquiries of potential participants.

The model of short voyage sail training using voyages of one or two weeks' duration is not universally accepted, for example. In the USA particularly there are a significant number of operators running programmes based on several months at sea. There are also many operators who include sail training for young people in their programmes, but whose operations may better be understood as 'open' charter programmes with youth sail training as one element within that. 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 for inclusion 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 many of our cases have some of the characteristics of such specialist programmes.

The report is organised under the following main headings:

- Research methodology and design
- Case selection
- Fieldwork preparation and planning
- Conduct of the fieldwork
- Findings
- Conclusions

Research methodology and design:

This section of the report gives an overview of the research approach briefly describing the various theoretical assumptions which underpin the work. Our objective has been to make these matters reasonably accessible to a non-specialist readership but sufficient to satisfy the minimum requirements of professionally conducted research. We describe the research design and the methods employed to collect data. In this section we have also discussed a number of issues and problems encountered in the project. Finally in this section the approach to analysis is explained and the basis established for the claims which follow in the latter parts of the report.

The overall purpose for the study is, as stated above, to *investigate the range of purposes and beliefs about the benefits of participation in sail training for young people. Participants' experiences and beliefs will be interrogated and conclusions drawn as to the impact of participation on their lives and development. The study will seek to distinguish key dimensions of difference in the nature of sail training programmes and to identify relationships between approaches and outcomes.*

More specifically, the key 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?

Research is based on particular assumptions about ontology (the nature of reality) and Epistemology (the nature of knowledge). In the field of experiential education Allison and Pomeroy (2000) summarised methodology literature drawing particularly on Guba and Lincoln (1994) as consisting of four primary schools of thought, positivism, post-positivism, critical theory and constructivism. It is now quite widely accepted that 'humanistic and qualitative' (Barrett and Greenaway, 1995, 53) approaches to research in outdoor education offer a fruitful avenue for increasing understanding of the value of such experiences. This is contrasted with the scientific paradigm that has, until recently, more often tended to be employed (Allison and Pomeroy, 2000). This study does not fit neatly into any one methodological category, being on the one hand informed by a humanistic sensibility and a phenomenological approach, while on the other using the kinds of structured systematic methods associated with nomothetic approaches.

The project has used a structured qualitative sociological method. The important questions that need to be investigated in this study of sail training concern the social nature of the experience and the purpose or purposes that are being served by such activities. These purposes may be understood as both social, concerned with young people in general, and as individual in relation to specific participants and their development. 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. The 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, 137).

The specific research questions for this study are concerned with young people's expectations, experiences of and reflections on sail training. In undertaking work in this paradigm it is important to be clear that the claims made from such work tend to involve improving understanding, developing conceptual ideas and practical implications. This can be contrasted with work from a positivist paradigm which can be summarised as aiming to find proof, identify causal relationships and identify 'laws'.

It was intended from the outset that findings would be based primarily upon interviews focussing on young people's interpretations of their own experiences. To complement this, data were collected using observations and voyage summaries in order to build a picture of life on board different vessels, in different contexts thus identifying the differences and similarities across the range of cases. A structured observation technique was used to collect data on participants' interactions with staff and other trainees. These observations were intended to enable the identification of distinctive features in different contexts, to illuminate the similarities and differences across a range of sail training cultures

A structured interviewing approach was used to elicit trainees' own motives and expectations, and to explore what they believe they have learned or are learning from their participation. The interviews also used a self-assessment scale to elicit trainees' own judgements of their social confidence at the start of voyages, then again in a post-voyage interview. This feature used a modified version of the confidence scale developed in adult literacy research (Tett, et al., 2005). Interviews took place during sail training voyages and, using telephone or email communication (or in a few cases face-to-face interviews), approximately three months after the voyage ended. It is important to note that although the interview data has been analysed using statistical methods this is still interpretive research in the interactionist tradition.

There are a number of ways of measuring self-confidence including assessments of psychological health, the best-known of these psychological measures being 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 were also 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.

The research team therefore used a method for measuring confidence that picked out relevant scenarios for that were grounded in situations that young people anywhere could face in their everyday lives. As the method was primarily to measure change over time within the respondents, a scale was designed that picked up on elements of their lives in sufficient depth and variety to allow scores to be calculated. 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 found that several days aboard are required for new participants to come to terms with life aboard ship, we do not regard the timing of these interviews as problematic. Indeed the finding in respect of differences between naïve and experience sail training participants confirms the view that little if any difference should appear in data from 'pre-voyage' interviews and those conducted in the first few days of a voyage.

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 researchers able to operate within a particular linguistic and technical culture. The research design therefore envisaged the recruitment of 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. A further advantage of this method is that one can argue that engaging in research data collection during voyages can lead to insights and enhanced reflective practice which can assist in developing the philosophy of the organisation. Informal feedback from associate researchers confirmed that this occurred through this research process.

The majority of the fieldwork was carried out by associates from within the participating organisations, drawn from among volunteer or paid staff, to conduct interviews and observations during and after the sample voyages. Each of the participating operators were to provide one or two people who would be associate researchers. These associates were required to be competent English speakers in order to participate. 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 the postgraduate students in the School of Education. During March 2006 an associate researcher training weekend took place in Edinburgh with a total of 22 participants.

The training focussed on approaches to interviewing and observation. A key preoccupation of the weekend was language and we were satisfied that the extensive discussions allowed associates to develop appropriate strategies for working in languages other than English that would nevertheless generate reliable data. The weekend was not simply a one-way transmission of training, but also provided an important opportunity to develop and refine the research instruments (the interview and observation frameworks). Associates provided a number of very useful suggestions for incorporation in the final versions of the research instruments and the associated guidance notes.

The project design, methods and procedures were subject to ethical scrutiny under the University of Edinburgh's established research ethical approval arrangements. The project has been conducted in accordance with the guidance found in The British Sociological Association *Statement of Ethical Practice*. In particular the project procedures sought to ensure that all participants in the study were enabled to give fully informed consent, and that data has been handled with full regard to undertakings of confidentiality. The participating operators were asked to ensure that participation in the study by trainees conformed to the specific national requirements regarding ethical concerns.

All trainees participating in voyages included in the study (whether interviewed or not) were provided with an information sheet in the appropriate local language giving an outline of the nature and purpose of the project and making appropriate undertakings in relation to confidentiality. Any explicit references in reports or other publications identifying individual trainees, staff and volunteers are subject to the approval of the individual concerned, and although participating sail training operators and vessels are named, data from individual vessels has been anonymised except in the reports which are to be provided directly to each operator.

Data were collected in four ways which are detailed below. These were developed from previous research in the field of youth work and of outdoor and experiential learning. Data collection instruments were piloted on two voyages during September 2005 and developed as a result of feedback from these two pilot studies. Structured data were collected in order to provide a uniform framework for associate researchers to use and to simplify analysis of a very large data set.

1. Early Voyage Interviews

Researchers undertook interviews with participants during the first few days of voyages. Ideally this would have been undertaken prior to stepping aboard but undertaking these during the first few days was a more practical approach. Interviews were semi structured and based on themes from previous work in sail training (McCulloch, 2002) and on the pilot study findings. Copies of the interview documentation and other instruments referred to below are included in the appendix to this report.

2. Overall Voyage Description

This was intended to provide context for the observation and interview data. Associates were asked to record simple information about the vessel, staffing, the trainees including age and sex, and about the voyage itself. This overview data allowed confirmation that the samples of trainees selected for interview were in fact reasonably representative of the balance in terms of age and sex. We were interested in differences such as those between longer voyages with fewer intermediate ports of call and shorter voyages with more frequent stops, as well as aspects such as weather and sea conditions.

3. Observation of Life Aboard

Associates were asked to record observations of a range of activities and situations aboard their vessel, including for example how trainees were dealt with on arrival, how safety briefings and technical instruction was conducted, how meals and other aspects of domestic life were arranged, and so on.

4. Post Voyage Interviews

These were designed to take place around 3 months after the voyage and could be conducted by telephone. Trainees were asked to reflect on aspects of their experience, and in particular they were asked about those aspects of their expectations and anxieties recorded in the first interview. Finally they were asked to respond to the confidence scale questions a second time.

Case selection:

Undertaking research involves finding a balance between volume and depth of information gathered. This study collected a large amount of information from a selection of organisations. Vessels included in the study were selected based on 'key dimensions of difference' (Allison & McCulloch, 2005) defined as national context, type and size of vessel. Following a presentation of the research design at the Sail Training International (STI) conference in Spain in 2005 a number of operators came forward volunteering their participation.

The intended range of cases to be included in the study was three large vessels defined as accommodating 30 or more trainees, eight to ten medium sized vessels accommodating from 13-29 trainees and four or five smaller vessels accommodating 12 or fewer. The model of *traditions* in sail training (McCulloch 2004, 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. It is neither practicable nor necessary to take account of every possible variance in selecting voyages for study. 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 therefore called for 30 voyages and 300 trainees as targets.

The world of sail training was divided into regions and vessels were sought from each part of the STI constituency with some attention to reflecting the size of the potential pool in each region. Thus we sought four operators in the USA and Canada, seven from Scandinavia and the Baltic, two from Australia and New Zealand, four from the North Sea countries and three or four from Southern Europe including France.

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. The target of 30 study voyages was exceeded by a small margin.

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 number of trainees interviewed varied from voyage to voyage but the target of involving overall, some 300 trainees in this way was just exceeded. 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 extent to which such a range of cases is numerically representative. The University of Otago 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 underrepresented in this study if they are in fact the commonest type of sail training operation. Given the need to represent a range of differences in the study we do not, however, find this feature problematic.

Fieldwork preparation and planning:

The research fieldwork drew on tested methods and techniques, applied in new ways in a new context. 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 an interview and observation frameworks based on previous sail training research in the UK (McCulloch, 2002). We also drew on previous work in literacy research which had used a measure of progress in social confidence (Tett, et al, 2005) as the basis for an element of the interview which would be used both at the beginning of voyages and around three months after to identify 'distance travelled' in relation to the theme of social confidence. The confidence scales were developed and tested both using a range of students from different courses and cultural backgrounds, and in the context of the pilot study.

A pilot study involving two voyages was undertaken during the period September-October 2005. The fieldwork was undertaken by a member of the project team and a Swedish-speaking postgraduate student recruited as a research assistant. The pilot study voyages took place aboard vessels operating on the western coasts of Canada and Sweden. This provided the opportunity to test and develop a structured interviewing approach and frameworks for observation for use in the main study. In particular it was possible to identify a range of common responses to interview questions. For example we found that responses to questions about what trainees were expecting from their voyage very commonly included reference to excitement or adventure, to sailing skills and to making new friends. These findings allowed us to provide lists of 'pre-coded' responses to simplify the recording of interview responses.

The training event provided a crucial opportunity to ensure that all the data collection activities were conducted as consistently as possible, and that associates were well informed about the purpose and requirements of their research fieldwork activities. Alongside that it was a very important opportunity to have the research instruments (interview and observation frameworks) reviewed by a much larger group. A number of assistants were recruited from among postgraduate students in the School, to assist with the training activities. The programme covered approaches to interviewing including simulated interviews, a briefing on observation approaches, and extensive discussion of issues raised by associates. A particular focus of attention was the question of language; it was particularly important that interviews were conducted in the same way whichever language (or indeed whichever variant of the same language) was in use.

Following on from the training event revised versions of the research instruments and guidance notes were prepared and distributed to associates both in paper and electronic forms. The latter were used in some cases to produce local language versions for ease of use on voyages. Associates were also supplied with an information sheet for distribution to all participants in voyages included in the study. Systems were set in place to manage the fieldwork through the setting up of a contacts and voyage database and the design of a system to ensure that the necessary materials were sent out to associates in good time for planned fieldwork voyages and to trigger the activity of post voyage interviews.

Conduct of the fieldwork:

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 voyages. Contact was re-established with these trainees after approximately 3 months and a short follow up interview conducted, most commonly by telephone. As anticipated it was not possible to make contact with all the trainees originally interviewed; 173 interviewees were successfully contacted for a second interview. Attrition of the sample is to be expected in follow up interviews, and we are satisfied that achieving a second interview with 53 per cent of those originally included gives good grounds for confidence in the findings. The achieved sample of second interviewees were adequately representative in terms of the range of vessels sailed, age, sex and prior experience and we are confident that a firm basis for findings is present in this respect.

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 data. A total of 155 '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. It is worth noting that most of the best returns of descriptive data both in terms of volume and quality were from associates sailing as supernumeraries; a handful of voyages stand out in this respect.

Some associates were able to put considerable amounts of energy into observation and recording, at one extreme providing the study with detailed voyage reports and a dozen detailed observation records along with several hours of video footage, from each of two voyages. At the other end of the scale there were instances where associates were only able to provide very brief outlines of the voyage as a whole (and in cases as noted earlier not even that). The quality and richness of observation data also varied from that provided by several associates known to have some previous experience or knowledge of this type of research, to some who provided, for example, detailed accounts of sail hoisting procedures but relatively little that would help a reader to understand the particular qualities of life aboard their particular vessel. Most of the returns of data fell somewhere between these extremes and provide a firm basis for some conclusions to be drawn.

The data were analysed by the project team during the period November 2006-March 2007. 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.

Findings:

Using the research questions as an organising framework this central element of the report explains the various analyses and their meanings.

To provide some context for the interview findings, some characteristics of the trainees interviewed are set out in Table 1a and 1b below. Associates were required to ensure so far as possible that the trainees interviewed on any given voyage were representative of the whole group of trainees on that voyage in terms of age and sex. This does not purport to be true probability sampling but is more representative than simple opportunity sampling. We are confident that the range of trainees interviewed provides the basis for some generalisation of these findings.

Regarding trainees' histories we have distinguished those with and without previous sail training experience; this has been found to be an important factor in several of the analyses and is therefore presented as a foundational distinction. We found the interviewees to be concentrated in the mid to late teenage range, with equal proportions of males and females overall. A small increase in the proportion of females was noted in the higher age ranges; gender differences were not a specific focus of this study but would provide a worthwhile topic for further investigation

Table 1a Participants by sex and prior experience of sail training

	All participants		Prior Sail Training Experience		No Sail Training Experience	
	No.	%	No.	%	No.	%
Male	164	50.6	31	19.0	133	81.0
Female	160	49.4	32	20.0	128	80.0
Total	324	100.0	63	19.4	261	80.5

Table 1b Participants by age and prior experience of sail training

	All participants		Prior Sail Training Experience		No Sail Training Experience	
	No.	%	No.	%	No.	%
<14yrs	34	10.8	5	14.7	29	85.3
14-17yrs	183	58.3	31	16.9	152	83.1
18-21yrs	74	23.6	17	23.0	57	77.0
>21yrs	23	7.3	9	39.1	14	60.9
Total	314	100.0	62	19.7	252	80.3

What benefits and effects do participants anticipate?

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.

Table 2 Reasons for participation

	All participants		With Prior Sail Training		No Prior Sail Training	
	No.	%	No.	%	No.	%
Sailed before	139	42.9	52	82.5	87	33.3
Recommendation	145	44.8	20	31.7	125	47.9
Idea of being on a boat	203	62.7	47	74.6	156	59.8
Challenge	206	63.6	32	50.8	174	66.7
Experience of new people	192	59.3	42	66.7	150	57.5
Experience of environment	170	52.5	37	58.7	133	51.0
Experience of leadership/ teamwork	16	4.9	6	9.5	10	3.8
Experience of visiting new places	29	9.0	6	9.5	23	8.8
Independent of family	4	1.2	1	1.6	3	1.1
Fun/good idea	47	14.5	8	12.7	39	14.9
Get away	35	10.8	6	9.5	29	11.1
Learn to sail	32	9.9	4	6.3	28	10.7
Personal Development	19	5.9	5	7.9	14	5.4
Not own choice to come	5	1.5			5	1.9
To be with friends	11	3.4	4	6.3	7	2.7
To gain an award	2	0.6			2	0.8
Once in a lifetime opportunity	11	3.4			11	4.2
Experience for future career	8	2.5	3	4.8	5	1.9
Accounts of sailing (books, films, family)	11	3.4	2	3.2	9	3.4
To compete in tall ships race	3	0.9	3	4.8		
Other	11	3.4	3	4.8	8	3.1
n=	324		63		261	

We note that almost half of all trainees had some prior sailing experience, in yachts, dinghies or sail training vessels. Even when those with prior ST experience are discounted, the proportion 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. The key point here is that we cannot simply divide trainees into 'naïve' and 'experienced' categories, but must think in terms of a continuum of experience from total novices on the one hand, to those with multiple sail training voyages logged, with many intermediate positions.

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 per cent of trainees in each case. Table 3 provides a fuller analysis.

Table 3 Most important reason for participation

	All participants		With Prior Sail Training		No Prior Sail Training	
	No.	%	No.	%	No.	%
Sailed before	13	4.1	7	11.5	6	2.3
Recommendation	13	4.1			13	5.0
Life on board	30	9.4	5	8.2	25	9.7
Challenge	68	21.3	4	6.6	64	24.7
Experience new people	30	9.4	6	9.8	24	9.3
Environmental reasons	6	1.9	3	4.9	3	1.2
Experience leadership/teamwork	8	2.5	1	1.6	7	2.7
Experience of new places	10	3.1	1	1.6	9	3.5
Independent of family	7	2.2			7	2.7
Fun/good idea	42	13.1	16	26.2	26	10.0
Get away	18	5.6	5	8.2	13	5.0
Not own choice	9	2.8	1	1.6	8	3.1
Personal development	6	1.9	1	1.6	5	1.9
Sailing/learn to sail	26	8.1	4	6.6	22	8.5
Relax/get rid of stress	3	0.9	3	4.9		
To be with friends	6	1.9	1	1.6	5	1.9
Other	6	1.9	1	1.6	5	1.9
n=	320		61		259	

Trainees offered 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.

Table 4 Pre-voyage concerns/anxieties

	All participants		With Prior Sail Training		No Prior Sail Training	
	No.	%	No.	%	No.	%
Seasick	125	38.5	15	23.8	110	42.0
Heights	75	23.1	10	15.9	65	24.8
Strangers	93	28.6	16	25.4	77	29.4
Confined spaces	58	17.8	5	7.9	53	20.2
Responsibility	43	13.2	7	11.1	36	13.7
Danger	70	21.5	9	14.3	61	23.3
Strangeness of place/ environment	29	8.9	5	7.9	24	9.2
Personal discomfort	39	12.0	6	9.5	33	12.6
Severe weather	15	4.6	2	3.2	13	5.0
Travel arrangements	13	4.0	2	3.2	11	4.2
Not being able to do things	19	5.8	4	6.3	15	5.7
Other	16	4.9	4	6.3	12	4.6
n=	325		63		262	

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 us 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 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.

Table 5 Pre-voyage anticipation

	All participants		With Prior Sail Training		No Prior Sail Training	
	No.	%	No.	%	No.	%
Excitement/adventure	205	63.1	41	65.1	164	62.6
Heights	133	40.9	27	42.9	106	40.5
Making friends	207	63.7	43	68.3	164	62.6
New places	180	55.4	37	58.7	143	54.6
Being at sea	101	31.1	22	34.9	79	30.2
Observing wildlife	70	21.5	3	4.8	15	5.7
New experiences/challenge	34	10.5	4	6.3	30	11.5
Non-sailing activities	17	5.2	6	9.5	11	4.2
Weather	11	3.4	4	6.3	7	2.7
Getting away	13	4.0	3	4.8	10	3.8
Fun	14	4.3	1	1.6	13	5.0
Flying	2	0.6			2	0.8
Whole experience	3	0.9			3	1.1
Being with friends	5	1.5			5	1.9
Other	15	4.6	4	6.3	11	4.2
n=	325		63		262	

Do participants experience these benefits and effects?

The tables that follow set out the responses to the first part of 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 is evident that 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 experience and novice trainees. This feature is also found in the data from the *confidence scales* and is explored further, below.

Table 6 *Expectations fulfilled*

	All participants		With Prior Sail Training		No Prior Sail Training	
	No.	%	No.	%	No.	%
Confidence	95	54.6	7	18.9	88	64.2
Technical skills	86	49.4	18	48.6	68	49.6
Teamwork skills	85	48.9	11	29.7	74	54.0
New friends	32	18.4	5	13.5	27	19.7
Self knowledge	21	12.1	2	5.4	19	13.9
Awards (certification)	19	10.9	7	18.9	12	8.8
Understanding others	13	7.5	3	8.1	10	7.3
New experience	6	3.4			6	4.4
Fun	4	2.3			4	2.9
Knowledge of nature	3	1.7	1	2.7	2	1.5
Work experience	3	1.7			3	2.2
New places	3	1.7			3	2.2
Career opportunity	2	1.1			2	1.5
None	2	1.1	2	5.4		
n=	174		37		137	

As an additional test of the question trainees were also asked if there were any of their specific expectations that had not been met. As Table 7 shows, 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 skills had not been met.

Table 7 *Expectations not fulfilled*

	All participants		With Prior Sail Training		No Prior Sail Training	
	No.	%	No.	%	No.	%
Confidence	5	3.4	1	3.7	4	3.4
Teamwork skills	6	4.1			6	5.0
Technical skills	8	5.5	1	3.7	7	5.9
Knowledge of nature	1	0.7	1	3.7	0	0.0
Awards (certification)	3	2.1			3	2.5
None	125	85.6	13	48.1	112	94.1
n=	146		27		119	

Table 8 shows the relative significance of the various aspects of the experience, as evidenced by trainees' accounts of what was most important for them. It is 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.

Table 8 Most important aspect of sailing training experience

	All participants		With Prior Sail Training		No Prior Sail Training	
	No.	%	No.	%	No.	%
Endurance/staying positive/ adaptability	4	2.3	1	2.9	3	2.1
Leadership/responsibility/real work	6	3.4	1	2.9	5	3.6
Good crew	5	2.9	1	2.9	4	2.9
Working as a team	23	13.1	5	14.3	18	12.9
Learning skills/experience sailing life	40	22.9	4	11.4	36	25.7
Good social experiences/new friends	73	41.7	11	31.4	62	44.3
Fun	11	6.3	2	5.7	9	6.4
Being away	8	4.6	3	8.6	5	3.6
Doing something new/challenging	18	10.3	1	2.9	17	12.1
Non-sailing activities (eg. rafting, cooking)	5	2.9			5	3.6
Whole experience	4	2.3			4	2.9
Learning to deal with people	3	1.7	2	5.7	1	0.7
Building confidence /self-development	9	5.1	2	5.7	7	5.0
Understanding cultures/language skills	7	4.0	4	11.4	3	2.1
Seeing new places	5	2.9	1	2.9	4	2.9
Other	8	4.6			8	5.7
n=	175		35		140	

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

Table 9 Impact of participation

	All participants		With Prior Sail Training		No Prior Sail Training	
	No.	%	No.	%	No.	%
Sailing could be a career	6	3.4	2	5.3	4	2.8
Want to sail again/doing more sailing now	14	7.8	4	10.5	10	7.1
Recommend to others	2	1.1			2	1.4
More confident trying new things	27	15.1	2	5.3	25	17.7
More confident with others/new friends	34	19.0	9	23.7	25	17.7
More self-confident	18	10.1	2	5.3	16	11.3
Learnt new/more sailing skills	9	5.0	3	7.9	6	4.3
Better able to tackle problems	4	2.2			4	2.8
Better understanding of people	8	4.5	2	5.3	6	4.3
Memories/stories to tell	8	4.5	2	5.3	6	4.3
Fun	4	2.2	2	5.3	2	1.4
Spiritual changes	1	0.6			1	0.7
Leadership skills/take on responsibility	7	3.9	4	10.5	3	2.1
More positive/happy/relaxed	7	3.9			7	5.0
Likes self better	1	0.6			1	0.7
More interest in water-related activities	3	1.7			3	2.1
Other	14	7.8			14	9.9
n=	179		38		141	

Unanticipated benefits and effects

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. An anxiety expressed by 40 percent of participation before the voyage, it is mentioned by just 13 percent post-voyage. The only concern that is strongly reflected in the post-voyage experience is that related to personal discomfort. Around 13 percent of participants had some concerns about personal comfort, but close to one-quarter reported this as a negative experience post-voyage.

Table 10 Pre-voyage and post-voyage concerns and experiences

	Pre-voyage anticipation	Pre-voyage anxiety	Positive experiences	Negative experiences
	%	%	%	%
Excitement/adventure	68.6		12.4	
Heights	43.5	24.5	3.4	
Making friends	67.6		47.6	
Seasick		41.5		14.7
New places/ environment	58.8	9.5	1.4	0.7
Being at sea	33.0		24.1	
Strangers		30.4		6.2
Confined spaces		19.0		
Responsibility		14.1	5.5	
Danger		22.9		
New experiences/challenge	11.1		12.4	
Non-sailing activities	5.6		10.3	
Weather	3.6	4.9	1.4	3.4
Getting away	4.2			
Fun	4.6		6.2	
Personal discomfort		12.7		21.4
Whole experience	1.0		4.8	
n=	325	325	117	115

Changes in participants' views of themselves

Several of the tables above throw some slightly indirect or inferential light on this aspect. The most important feature of the study in this respect however 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. The statistical analysis applied to this measure is set out in appendix 4. As was explained in the methodology section this is a measure of social confidence rather than a psychological measure of self-esteem.

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 is 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.

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

Key differences between sail training programmes

There are two different 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. 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 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.

Several distinct models were evident in the data. The all-volunteer model was found in UK and Scandinavian cases, operating smaller and medium sized vessels. Some professional seafarers have been critical of this approach on safety grounds but generally speaking the records of such operations suggest adequate standards of seamanship and safe operation. The second model uses a small number of professional staff (for example a professional master and mate, or just a professional skipper) supported by unpaid volunteers as watch leaders or deckhands. In one case we found a professional engineer and bosun supporting a volunteer master, mate and watch leaders, but this did appear to be unusual. The third model employs professionals typically as master, mates, engineer, bosun and cook with a smaller number of volunteers in watch leader and similar supportive roles. There are also a number, mainly larger vessels, which carry a large professional crew of 20 or more paid professional crew with no formal volunteer staff arrangements.

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.

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.

Analysis of the observation data generates the following first-order categories:

- Arrivals and departures at the beginnings and ends of voyages (7 instances from 6 voyages)
- Meetings and briefings (32 instances from 15 voyages)
- General seamanship activities (33 instances from 15 voyages)
- Specific formal technical instruction (8 instances from 6 voyages)
- Sail handling (33 instances from 16 voyages)

- Meals and cooking (15 instances from 13 voyages)
- General domestic life (17 instances from 15 voyages)
- Games & structured social activity (13 instances from 9 voyages)

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.

Some comment on the main categories is required. *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 shows 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 are physically separated 'naval style' 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 on the one hand more 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.

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 activity both ashore and aboard with varying degrees on connection to seafaring. In this programme (and in others to varying degrees) 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.

Table 11 Changes on confidence by selected vessels

Item	Vessel A	Vessel B	Mean Difference (A-B)	Significance
CS1 Getting on in a group of strangers	Vessel 17	Vessel 7	0.78	0.018
		Vessel 8	1.13	0.002
		Vessel 10	1.13	0.017
		Vessel 21	1.27	0.007
CS5 Taking on a leadership role	Vessel 17	Vessel 7	1.26	0.000
		Vessel 10	1.11	0.008
		Vessel 12	1.47	0.008
		Vessel 14	1.27	0.007
CS8 Working cooperatively	Vessel 16	Vessel 7	0.66	0.019
	Vessel 17	Vessel 7	0.64	0.030
CS10 Speaking in formal meetings	Vessel 17	Vessel 7	1.19	0.004
		Vessel 8	1.30	0.026

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.

Conclusions

There are three main conclusions to be drawn from these findings.

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 and 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 we believe that this is a matter that might warrant further investigation.

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 exactly what it says in the publicity, and what its proponents claim. Trainees develop confidence in themselves, they develop their capacity for teamwork and they develop technical skills. 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.

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 leads 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.

As the concluding section of the findings above demonstrate however, considerable significance 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. 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. It is certainly not our view that the structured type of programme is superior, simply that it is more effective in achieving those particular ends.

It is something of a stereotype to include in conclusions a claim regarding the 'vital need' for further research. We are confident that these findings represent a worthwhile outcome to the project and that they stand as a significant contribution to the field. There are nevertheless a number of matters that we believe could be investigated further and that such investigations would help to enhance understanding and improve practice. These could include some more detailed case studies of different types of programme, follow-up interviews with participants in the 2006 study cohort, more detailed studies of the significance of features such as seasickness and general discomfort, and further investigation of the meanings trainees ascribe to experiences of working aloft.

There are also some potential implications for sail training operators. These range from the macro to the micro level. At the level of general strategy and approach a study such as this may guide and inform decisions about what kind of vessel to use, and most importantly, what kind of programme to operate. The finding in relation to trainees' perceptions of discomfort might be considered in relation to the design and fitting out of vessels, so that steps could be taken to alleviate factors causing discomfort. It might however be argued that a degree of physical discomfort is a necessary part of the experience of seafaring and not one that trainees would necessarily benefit by being insulated from. Similarly the findings in relation to trainees' fears and anxieties might be considered when operators are reviewing their approaches to briefing and supporting trainees in the first hours and days of their voyages.

There are possible lessons to be drawn from these findings in relation to the ongoing development and training of sail training practitioners, whether paid or volunteer. Recruitment of trainees is also a vital concern given the imperative to run vessels at or near their capacity, and it is clear that the trainees themselves are one of the best if not the best marketing resource available. Exploiting the idea of personal recommendations should continue to bring new participants into the frame. Finally, the methods used in this study could be used as the basis for systematic evaluation of programmes and of individual voyage, and this has been an explicit expectation from the funder's perspective from the start.

We end with an observation about the importance of maintaining a clear view about the purpose of sail training. Operators should be wary of assuming, simply because purposefully structured educational programmes have particular effects, that such programmes are somehow more desirable than those with a more traditional emphasis on seafaring and adventure. It seems to us vital to remember that sail training is keeping alive seafaring traditions of inestimable cultural or heritage value, and that it is absolutely essential to the health of the sail training movement to treasure and nurture those traditions.

Appendix I Interview Returns

The tables below show the distribution of interviewees by vessel and by participating operator (organisation).

Table 12a Interview Returns by Sail Training Organisation

Organisation	Returns	
	No.	%
Org 1	10	3.1
Org 2	19	5.8
Org 3	4	1.2
Org 4	15	4.6
Org 6	62	19.1
Org 7	10	3.1
Org 8	4	1.2
Org 9	20	6.2
Org 10	10	3.1
Org 11	34	10.5
Org 12	6	1.8
Org 13	28	8.6
Org 14	46	14.2
Org 15	37	11.4
Org 16	9	2.8
Org 17	11	3.4
Total	325	100.0

Table 12b Interview Returns by Vessel

Vessel	Returns	
	No.	%
Vessel 1	4	1.2
Vessel 2	10	3.1
Vessel 3	6	1.8
Vessel 4	10	3.1
Vessel 5	4	1.2
Vessel 6	15	4.6
Vessel 7	50	15.4
Vessel 8	12	3.7
Vessel 10	19	5.8
Vessel 12	20	6.2
Vessel 13	18	5.5
Vessel 14	28	8.6
Vessel 16	34	10.5
Vessel 17	37	11.4
Vessel 19	10	3.1
Vessel 20	9	2.8
Vessel 21	11	3.4
Vessel 22	28	8.6
Total	325	100.0

Appendix 2 Interview and observation instruments**SAIL TRAINING INTERVIEW FRAMEWORK****VOYAGE DETAILS**

Interview conducted by (Name of Research Associate): _____

Name of interviewee: _____

Name of Vessel: _____

Voyage dates: From (dd/mm/yy) _____ To dd/mm/yy) _____

Day and time of interview Day 1 2 3 4 Time (use 24hr clock)

NB Day 1 is the day trainees arrive aboard

Please begin by reading the interviewee the ethical statement and asking them to sign indicating they are participating in the interview willingly.

Ethical Statement

I have seen an information sheet explaining the purpose of the research and I agree to participate in an interview. I understand that I am not obliged to answer any particular questions and that I may terminate the interview at any time. I understand that this interview is confidential and that my responses will not be seen or discussed by anyone other than the Edinburgh University Research Team except in relation to any specific concerns about my own or other trainees safety. Specific concerns in relation to safety or well being may be communicated to the vessel's master with proper regard for confidentiality.

Signed

Date

The confidence scales section needs a more formal approach than the rest of the interview and it is important that you make it clear that the questions and situations in the confidence scale are about how confident they are, about themselves, in a general sense. This part of the interview **is not about** how confident they feel about aspects

1) Confidence scales

I'm going to ask a series of short questions about how confident you feel in yourself. The questions are about how confident you feel in a number of everyday situations you might find yourself in. I'd like you to estimate how confident you feel about each situation, on a scale from zero to 4, where zero describes your feeling not at all confident about a situation, and 4 describes your feeling very confident about a situation.

Please circle the appropriate number in each case

	Not at all confident	A little confident	Fairly confident	Confident	Very confident
1.01 Meeting new people	0	1	2	3	4
1.02 Getting on with a group of strangers	0	1	2	3	4
1.03 Speaking in a group	0	1	2	3	4
1.04 Complaining about problems	0	1	2	3	4
1.05 Taking on a leadership role	0	1	2	3	4
1.06 Dealing with conflict in a group	0	1	2	3	4
1.07 Dealing with authority figures (eg teacher/lecturer/supervisor)	0	1	2	3	4
1.08 Working cooperatively with others to achieve a goal	0	1	2	3	4
1.09 Understanding other people's points of view	0	1	2	3	4
1.10 Speaking up in a formal meeting	0	1	2	3	4

This first part of the interview is about how the trainees came to be on the voyage.

2 Is this your first sailing voyage or have you been before?

If interviewee has been sailing before, ask about that previous experience.

When was that?

For how long?

On what kind of vessel?

3 How long have you known you would be coming on this voyage? (How many weeks?)

4 How did you come to be participating in this voyage?

Prompts: How did you find out about it?

Did you make the decision to come, or did someone else suggest that you should come?

How was your participation financed?

Did you come as part of a group? If yes, what was that group?

This next section focuses on the trainees' motivation - why they wanted to take part in the voyage.

5 What were your main reasons for wanting to participate in this voyage?	
<i>Tick all relevant boxes</i>	
5.1 Have sailed before and enjoyed the experience	
5.2 Recommendation from someone else who had done it before	
5.3 Liked the idea of being on a boat	
5.4 Wanted the challenge of something different	
5.5 Wanted to experience working and living with new people	
5.6 To have experience of this environment (wildlife, climate, scenery etc.)	
5.7 Other (<i>interviewee's own words</i>)	
6 What was the most important reason for your decision to participate? <i>(interviewee's own words)</i>	

In this section of the interview the trainees will be asked to reflect on their feelings about the voyage before they arrived on board.

7 Thinking back, before you came here were there things about going to sea that you were not looking forward to or were at all anxious about?

Tick all relevant boxes

7.1 Seasickness	
7.2 Working at heights / up the masts	
7.3 Getting along with strangers	
7.4 Living in a confined space	
7.5 Being responsible for others' safety	
7.6 Being in a dangerous environment	
7.7 Other (interviewee's own words)	

8 Again, thinking back, was there anything about going to sea that you were particularly looking forward to?

Tick all relevant boxes

8.1 Excitement or adventure	
8.2 Working at heights/aloft	
8.3 Making new friends	
8.4 Going to new places	
8.5 Other (interviewee's own words)	

The final section of the interview deals with the trainees' expectations and what they hope to gain from the experience.

9 Looking to the future now, what do you expect to gain from your participation in this voyage?

(What do you hope to learn? Ask informant to consider emotional and personal aspects as well as 'learning about sailing' responses)

Tick all relevant boxes

9.1 Become more confident	
9.2 Learn to work in a team	
9.3 Learn technical skills	
9.4 Other (interviewee's own words)	

10 Where do you think your ideas about what you might gain from this experience have come from?

Tick all relevant boxes

10.1 Talking to previous participants	
10.2 Reading vessel operator's publicity	
10.3 Family history of sailing/seafaring	
10.4 Other (interviewee's own words)	

The Moray House School of Education
The University of Edinburgh
International Sail Training Research Project
General Voyage Report

Please use this sheet to record a general overview of the voyage during which you have collected data. Include in your overview any information that you think will be important or of interest in addition to details of the waters sailed, who the trainees were, who the staff were and the overall character of the voyage.

Your Name		
Name of Vessel		
Voyage Dates and Start/Finish		
Starting on / from (port)	Ending on / at (port)	
Brief description of vessel (Size, Rig etc.). A sketch or diagram may be helpful but is not essential.		
Staffing complement (Number and designations of staff including paid/professional and volunteer staff)		
Trainees		
Number	Age range	Sex

<p>Ports & Anchorages visited</p>
<p>Brief description of voyage (long or short passages, overnight sailing, day sails etc.)</p>
<p>Weather & Sea Conditions During Voyage</p>
<p>Any Additional Information</p>

Appendix 3: Guidance for research associates

Introduction

These notes are based on the Associate Researcher's Pack prepared for the training event in Edinburgh in March 2006. They are intended to help associates and other fieldworkers to carry out their activities on behalf of the project, so that the work done on different vessels and in different countries is conducted in a similar way. The notes include an outline of the purpose and design of the project, descriptions of the various activities associates are expected to carry out, samples of observation data collected during the 1997-2001 study of sail Training in the UK, and details of the arrangements for research materials distribution to associates and the return of completed reports to Edinburgh. Please note that this document includes many changes from the original Associates' Pack and it is important that you read it fully and carefully.

Purpose and Approach of the Research

The purpose of the study is to **investigate the benefits of participation in sail training for young people. The study is intended to distinguish key differences in the nature of sail training programmes, for example using different types of vessel or in different national cultures.**

The size and type of vessel, number and social background of trainees on board and whether or not it is their first sail training experience are all important differences. The nationality and culture of sail training operator and trainee crew, quality and character of professional sea staff, and the voyage duration and voyage conditions may all be significant.

The study is intended to provide the basis for answers to the following questions:

What benefits and effects do participants anticipate from their experience and what influences those expectations?

To what extent do participants experience these benefits and effects as being achieved?

To what extent do participants experience unanticipated benefits and effects?

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?

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?

Research Methods

The project will use a structured interviewing approach with individual trainees. The purpose of the interviews is to collect information about participants' experiences of sail training and to identify changes in their confidence and self-esteem. Interviews will take place at the beginning of voyages, then again after the voyage has ended, using telephone or email communication, approximately three months after returning home.

A systematic observation technique will be used to collect data on participants' interactions with staff and other trainees. These observations will enable assessment of trainees' capacity to work with others in a group, to take responsibility for others as well as themselves and to operate as a member of a larger social context. The most important use of the observations made by associates will be comparisons between the ways things are done in different countries, and on different types of vessels.

We have been through an extensive process of consultation to identify a range of operators and vessels. We believe the range of vessels selected are reasonably representative of the different national cultures and the range of size and types of vessel in membership of STI. We want to include up to three voyages on each of approximately 15 sail training vessels selected to represent the mainstream of sail training internationally.

Ethical Issues

In recent years social scientists have become much more concerned to ensure that people who are involved in research as subjects, informants, interviewees, are treated with care and respect. In this University we have quite strict rules about these matters, and for this project we have had to go through a detailed process to gain ethical approval. There are several important principles to be considered.

- The safety and well being of research participants
- Clear information about the purpose and nature of the research
- Informed consent to participate (in interviews)
- Respect for privacy and confidentiality

We would like you to make a short announcement to the whole ship's company at the beginning of each voyage, explaining what the project is, and that you will be making observations and conducting interviews during the voyage. You should do this yourself if possible, rather than it being done by some other member of staff. You should make it clear that individuals are under no pressure to participate in interviews and that if they do not want to be interviewed that is not a problem. You should also distribute the participants' information sheet to everyone on board including the staff; you will be supplied with these in the appropriate language.

We would like you to make a note that you have made this announcement and distributed the information sheet. There is a space in the general voyage report sheet for you to make a note that this briefing has been given, indicating when it was done, (for example after the safety briefing or at supper time on the first evening or whenever it was).

You will also see that on the interview documents there is a space for the person you are interviewing to sign that they understand the purpose of the interview, that they understand that they can end the interview whenever they wish and so on. This will be printed on the documentation, again in the appropriate language for your country.

The last thing to say about ethics is that it is absolutely crucial that the research does not interfere with the safety of the vessel or any person. We have included a very strong statement about that in our agreement with vessel operators and we want you to be very clear about the priorities.

Research Activities

The General Voyage Report

In order to provide a context for the interviews and observations, we would like you to provide a general descriptive account of each voyage in the study. This does not need to be very detailed but should include a description of the vessel, some information about who the staff are (how many and their titles or roles, whether they are full time or part time, paid or voluntary, men or women and so on). Similar information about the trainees will also be helpful. For example one might say there were 20 trainees on board, they were aged from 16 to 18 years of age, there were 12 girls and 8 boys and their participation had been organised by their school.

If there are additional sources of information about the boat, for example a leaflet or web pages that would be useful please include a copy or a note of the web address if you can.

In addition to this it will be helpful to include a short account of the voyage, in terms of ports and anchorages visited, distance and duration of passages, and weather conditions experienced. This information may be important and can help us to understand the different ways trainees describe their experience. We have included a pre-printed sheet for you to use for the general voyage report which we hope will make this task simple and easy.

Interviews

We are hoping that each associate will be able to interview about ten trainees per voyage, although that number will vary from voyage to voyage. It is quite important that these interviews are conducted early in the voyage. Ideally you should try to conduct interviews as soon as people arrive on board but it will not be practical to do that in most cases. We certainly do not want to discourage you from continuing to conduct interviews as the voyage continues.

Selecting from a group of trainees is an important task. Thinking back to the question about who the trainees are on a particular voyage, you should try to ensure that the trainees you interview are roughly representative of the range of young people aboard. For example if you are sailing with 4 girls and 8 boys you should try to interview twice as many girls as boys. Similarly if there are people from a range of different social class backgrounds you should try to select interviewees that represent that range.

You should also think about the personal characteristics of the trainees. Some will be quieter and perhaps less confident, and some will be more outgoing and appear more

confident. It is important to avoid interviewing only the more confident trainees. It is also important to choose the right moment, so for example if someone is clearly somewhat anxious on first arriving aboard, you should give them a little time, perhaps a day or so, to relax a little before approaching them for an interview.

The interview schedule is quite structured but you should remember that this is not simply a series of questions and answers. The first thing is to ask the person you are interviewing to sign the 'ethical declaration' on the interview form. Following the training event we have moved the 'confidence scale' element in the interview to the beginning so that comes next. This needs a more formal approach than the rest of the interview and it is important that you make it clear that the questions and situations in the confidence scale are about how confident they are, about themselves, in a general sense. This part of the interview is not about how confident they feel about aspects of being aboard the boat.

It's very important to read the instructions to the interviewee as accurately as you can manage. We hope that the training session will have helped you to think about the particular language you will use in order to be as consistent as possible. Teenagers can sometimes be a bit reticent in talking about themselves so you may find you need to encourage them to talk. The training session should have helped you to think about the best ways of doing that. The interview schedule has space for recording responses in two different ways. In the first place you are invited to consider whether some of the interviewee's response to some of the questions fit one of the 'pre-coded responses'. For example if a trainee responds to the question about the main reasons that made them want to participate in this voyage by talking about the challenge and also about a recommendation from a previous participant, you can simply mark the two pre-coded responses that refer to those aspects.

You will see that the final version of the interview document has some changes from the draft we used at the training session. Each separate section of the interview is headed with a shaded 'box' like this:

This first part of the interview is about how the trainees came to be on the voyage.

The information in the box is to help you by providing a short explanation of the purpose behind each set of questions. The text in the box is NOT intended to be read out to the person you are interviewing.

You will also see that some different typefaces have been used to distinguish different kinds of information. The questions that you should actually use in the interview are in bold, like this: **What were your main reasons for wanting to participate in this voyage?**

Then there are various pieces of information or advice for you as the interviewer, printed in italic, like this: *If interviewee has been sailing before, ask about that previous experience.*

Text in italic is for your guidance, not to be read to the interviewee. In several places you will see prompts in italic; these are phrases or additional questions to use if the interviewee needs some help or encouragement to talk, but don't use them unless you need to.

Finally there are a number of places where you will see plain text used, either like this:

When was that?

For how long?

On what kind of vessel?

Which is a list of possible details (in this case about previous voyages) for you to record what the interviewee has told you.

Or in a table like this:

What were your main reasons for wanting to participate in this voyage?	
	<i>Tick all relevant boxes</i>
Have sailed before and enjoyed the experience	
Recommendation from someone else who had done it before	✓
Liked the idea of being on a boat	
Wanted the challenge of something different	
Wanted to experience working and living with new people	
To have experience of this environment (wildlife, climate, scenery etc.)	✓
Other (<i>interviewee's own words</i>)	

These are lists of possible responses that were commonly given to questions like this in previous studies including the pilot study for this project. They are NOT intended to be read to interviewees, but only to provide you with a convenient way of recording people's responses. So for example if a trainee tells you about how much their brother had enjoyed participating in a voyage, and how they were hoping to see whales, you would tick the second and the sixth item as shown above. It is important to understand that the pre-coded responses are there to help you, they are not for presenting to the person you are interviewing for them to choose from.

It is also important to note down any particular words and phrases the respondent uses, especially if part of what they tell you does not fit the pre-coded categories. Some of the questions are set out in a way that requires you to briefly note what the interviewee actually says. The last thing is to take down the interviewees' details. Please try to obtain as much information as you can, and please make sure that it is written clearly so that follow-up contact is as easy as possible.

After the voyage we will contact you again to remind you about the post-voyage interviews. These should take place between ten and fifteen weeks after the voyage ends. The telephone interview is a simpler structure than the first interview, but also includes the same 'confidence scale'. It is very important to deal with this in the same way as you did on the voyage. If conducting a telephone follow-up interview is not practical you may, if you wish, send your interviewees the questions by e-mail.

Observation

We spent some time at the training event discussing and practising observation. The important things are to be systematic and consistent in what you observe and record. There are a number of specific activities and events we would like you to try to observe. In some cases these are singular events (such as arrival on board) but others, such as mealtimes or entering and leaving harbours and anchorages, will recur throughout the voyage and you can use your own judgement about which specific instances you report on. That might be because a particular mealtime was typical, or because it was unusual in some way.

The specific events we hope you will be able to observe are:

- Trainees' arrival on board
- Initial briefings for trainees
- Slipping moorings and leaving port
- Hoisting and stowing sails
- 'On watch' activities at sea
- Cooking and serving meals
- Cleaning ship
- Anchoring / weighing anchor
- Arriving in port and mooring or tying up
- Games and social activities
- Briefings and reviewing of activities.
- Discussions or announcements of passage plans
- End-of-voyage activities and departure.

We hope you will be able to record something about most of these but we do not expect everyone to cover everything.

Some of the aspects your records should include are when the activity observed took place, who was involved, what kinds of things were said, what instructions were given and what decisions and discussions took place. The observation record sheets are set out in a way that we hope will make that easy to achieve. In order to help you think about what you might focus on and how to report on that, the following section gives some examples of observation records created during the 1997-2001 study of Sail Training in the UK.

Your materials will provide for about 20 observation records to be made during the course of each voyage. We do not expect that every voyage will generate 20 recordings of this kind, for example a five day-voyage will not present as many opportunities as a ten or twelve day trip. Similarly if the weather is making more demands it may be more difficult to make and report your observations. Just do the most you can reasonably manage!

Appendix 4: Statistical analysis – social confidence scales.

The Social Confidence measure used in the current study showed a Cronbach alpha coefficient of 0.78. This is a measure of *reliability*, a measure of the stability or consistency of the responses from informants across the sample. A Cronbach alpha of 0.7 or greater is generally regarded as confirming the consistency of data in this type of study.

Confirmatory Factor Analysis -Two factor solution: The ten items of the confidence scale were subjected to a principal components analysis (PCA) using SPSS. The suitability of the data for factor analysis was assessed. The correlation matrix revealed the presence of many coefficients of 0.3 or above. The Kaiser-Meyer-Okline value of 0.81 was higher than the recommended value of 0.6 (Kaiser, 1970, 1974) and the Bartlett's Test of Sphericity (Bartlett, 1954) was statistically significant, which supports the factorability of the correlation matrix.

PCA revealed the presence of two components with eigenvalues greater than 1, explaining 28.76 per cent and 17.26 per cent of the variance respectively. The screeplot revealed a clear break after the second component and using Catell's (1966) scree test, it was decided to retain the two components for further investigation. A Varimax rotation was performed to aid in the interpretation of these components. The rotated solution (Table below) revealed the presence of a simple structure (Thurstone, 1947) with both components showing a number of strong loadings. This two factor solution explained 45.4 per cent of the variance with Component 1 contributing 28.1 per cent, Component 2 17.3 per cent.

Table 13 Varimax Rotation of Two Factor Solution for Confidence Scale Items

Item	Component	
	1	2
Meeting new people	.732	
Speaking in group	.717	
Leadership	.654	
Speaking in meetings	.644	
Complaining	.554	
Getting on with strangers	.542	.365
Dealing with conflict	.494	.316
Understanding other views		.764
Cooperative working		.689
Dealing with authority		.557
Percentage variance explained	28.1%	17.3%

A one-way between groups analysis of variance was conducted to explore the impact of the different vessel programmes on changes in confidence, as measured by the Confidence Scale (CS). There was an overall positive change ($\bar{x}=0.28$). Inspection of the mean differences between pre-voyage and post-voyage scores (Table 3) suggests that the effect is greater in some vessels than in others. Vessel 17, for example, shows the highest change ($\bar{x}=0.82$), while with Vessel 3 there is a negative effect ($\bar{x}=-0.25$).

Table 14 Mean Change in Confidence by Vessel

	N	Mean	Std. Deviation
Vessel 2	2	-0.1	0.1
Vessel 3	2	-0.3	0.1
Vessel 4	5	-0.1	0.5
Vessel 5	4	-0.1	0.3
Vessel 6	3	0.0	0.7
Vessel 7	39	0.2	0.4
Vessel 8	12	0.1	0.4
Vessel 10	8	0.0	0.4
Vessel 12	19	0.2	0.5
Vessel 14	21	0.0	0.5
Vessel 16	24	0.5	0.5
Vessel 17	22	0.8	0.4
Vessel 20	5	0.6	0.1
Vessel 21	7	0.1	0.3
Total	173	0.3	0.5

Analysis of variance also indicates that there was significant effect for vessel 17 at the $p < 0.05$ level on four items: CS1 [$F(12, 144)=3.42$], CS5 [$F(12, 144)=3.06$], CS8 [$F(12, 144)=3.22$] and CS10 [$F(12, 143)=2.41$]. In each case the effect size, calculated using eta square, was above 0.14, which according to Cohen (1988) indicates a large effect.

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